

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**

SUBMIT IN TRIPLICATE*

FORM APPROVED
OMB NO. 1040-0136
Expires: February 28, 1995

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. UTU-025963
TYPE OF WELL <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONE		6. IF INDIAN, ALLOTTEE OR TRIBE NAME UTE TRIBE
OIL WELL GAS WELL OTHER		7. UNIT AGREEMENT NAME N/A
2. NAME OF OPERATOR QUESTAR EXPLORATION & PRODUCTION, CO.		8. FARM OR LEASE NAME, WELL NO. WV 15D-23-8-21
3. ADDRESS 11002 E 17500 S VERNAL, UT 84078		9. API NUMBER: 43-047-39664
Contact: Jan Nelson E-Mail: jan.nelson@questar.com		10. FIELD AND POOL, OR WILDCAT Wansis - NATURAL DUTIES Yallu
Telephone number Phone 435-781-4331 Fax 435-781-4395		11. SEC., T, R, M, OR BLK & SURVEY OR AREA SEC. 23, T8S, R21E Mer SLB
4. LOCATION OF WELL (Report location clearly and in accordance with and State requirements*) At Surface 626309X 668' FSL 1994' FEL, SWSE, SECTION 23, T8S, R21E At proposed production zone 4440086Y 40.103443 -109.518106		12. COUNTY OR PARISH Uintah
14. DISTANCE IN MILES FROM NEAREST TOWN OR POSTOFFICE* 11 +/- MILES EAST OF OURAY, UTAH		13. STATE UT
15. DISTANCE FROM PROPOSED LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (also to nearest drlg, unit line if any) 668' +/-	16. NO. OF ACRES IN LEASE 280.00	17. NO. OF ACRES ASSIGNED TO THIS WELL 40
18. DISTANCE FROM PROPOSED location to nearest well, drilling, completed, applied for, on this lease, ft	19. PROPOSED DEPTH 16,525'	20. BLM/BIA Bond No. on file ESB000024
21. ELEVATIONS (Show whether DF, RT, GR, ect.) 4829.5' GR	22. DATE WORK WILL START ASAP	23. Estimated duration 70 Days
24. Attachments		

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

- | | |
|---|---|
| 1. Well plat certified by a registered surveyor.
2. A Drilling Plan
3. A surface Use Plan (if location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office). | 4. Bond to cover the operations unless covered by an existing bond on file (see item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be required by the authorized officer. |
|---|---|

RECEIVED
SEP 27 2007

DIV. OF OIL, GAS & MINING

SIGNED Jan Nelson Name (printed/typed) Jan Nelson

DATE 9-25-07

TITLE Regulatory Affairs

(This space for Federal or State office use)

PERMIT NO. 43047-39664 APPROVAL DATE _____

Application approval does not warrant or certify the applicant holds any legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon

CONDITIONS OF APPROVAL, IF ANY:

BRADLEY G. HILL
ENVIRONMENTAL MANAGER

APPROVED BY [Signature] TITLE _____

DATE 10-01-07

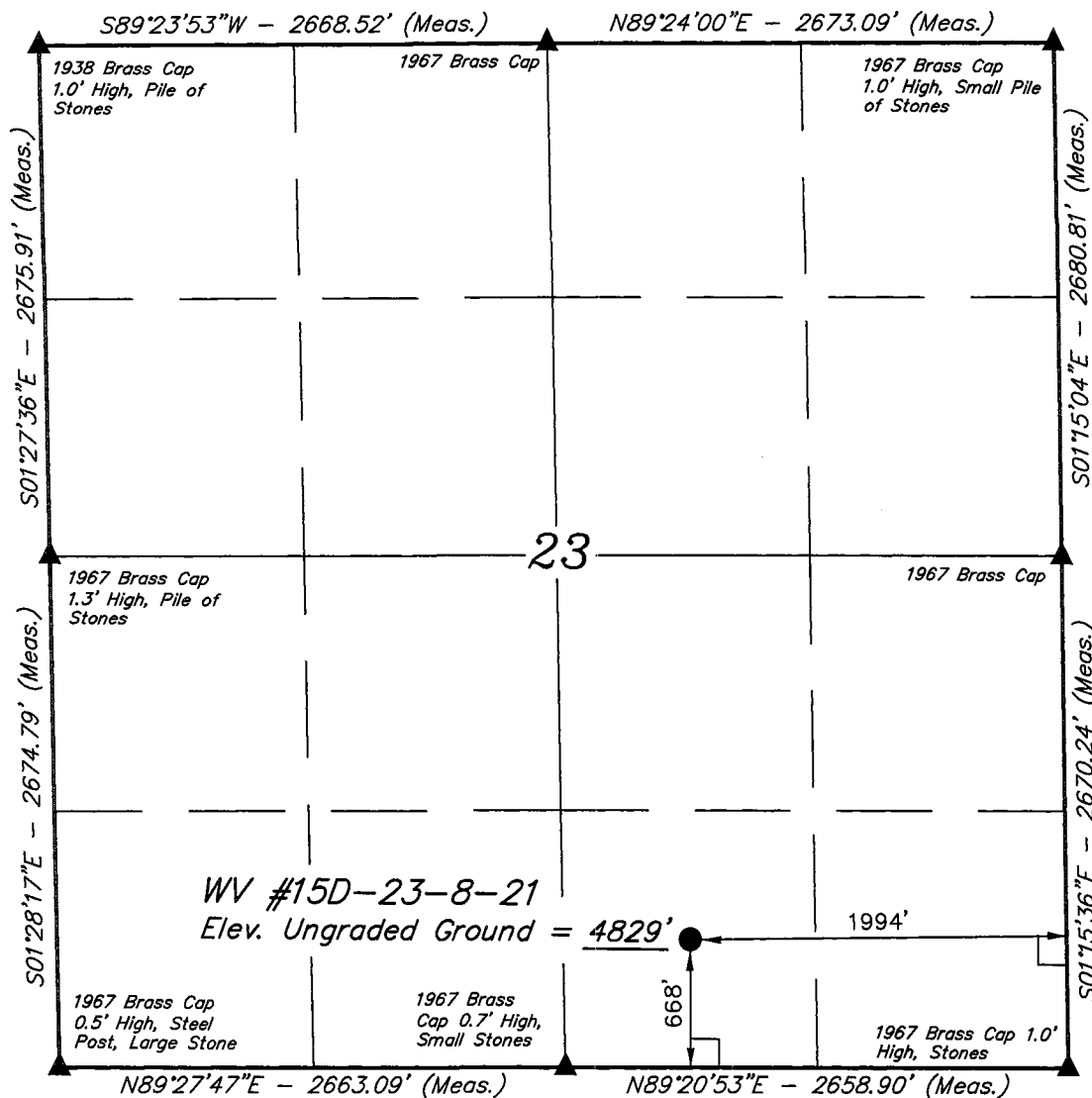
*See Instructions On Reverse Side

Title 18 U.S.C Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction

CONFIDENTIAL

Federal Approval of this
Action is Necessary

T8S, R21E, S.L.B.&M.



LEGEND:

- └─┘ = 90° SYMBOL
- = PROPOSED WELL HEAD.
- ▲ = SECTION CORNERS LOCATED.

(NAD 83)
 LATITUDE = $40^{\circ}06'12.64''$ (40.103511)
 LONGITUDE = $109^{\circ}31'07.30''$ (109.518694)
 (NAD 27)
 LATITUDE = $40^{\circ}06'12.77''$ (40.103547)
 LONGITUDE = $109^{\circ}31'04.82''$ (109.518006)

QUESTAR EXPLR. & PROD.

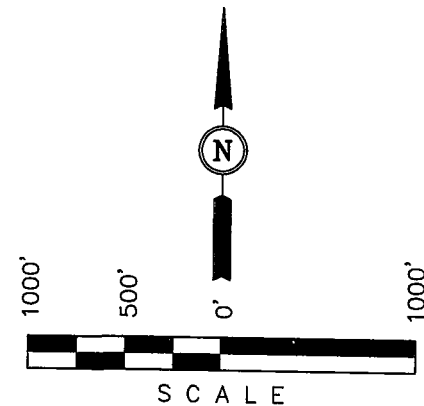
Well location, WV #15D-23-8-21, located as shown in the SW 1/4 SE 1/4 of Section 23, T8S, R21E, S.L.B.&M., Uintah County, Utah.

BASIS OF ELEVATION

BENCH MARK 20EAM LOCATED IN THE SE 1/4 OF SECTION 35, T8S, R21E, S.L.B.&M., TAKEN FROM THE OURAY SE, QUADRANGLE, UTAH, UTAH COUNTY, 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 4697 FEET.

BASIS OF BEARINGS

BASIS OF BEARINGS IS A G.P.S. OBSERVATION.



CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEY MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.



UINTAH ENGINEERING & LAND SURVEYING
 85 SOUTH 200 EAST - VERNAL, UTAH 84078
 (435) 789-1017

SCALE 1" = 1000'	DATE SURVEYED: 05-31-07	DATE DRAWN: 06-05-07
PARTY D.A. T.R. L.K.	REFERENCES G.L.O. PLAT	
WEATHER WARM	FILE QUESTAR EXPLR. & PROD.	

Additional Operator Remarks

Questar Explor. & Prod. Co. proposes to drill a well to 16,525' to test the Dakota. If productive, casing will be run and the well completed. If dry, the well will be plugged and abandoned as per BLM and State of Utah requirements"

Please see Onshore Oil & Gas Order NO. 1

Please be advised that Questar Explor. & Prod. Co. agrees to be responsible under the terms and conditions of the lease for the operations conducted upon the lease lands.

Bond coverage for this well is provided by Bond No.ESB000024. The principal is Questar Explor. & Prod. Co. via surety as consent as provided for the 43 CFR 3104.2.

DRILLING PROGRAM

ONSHORE OIL & GAS ORDER NO. 1
Approval of Operations on Onshore
Federal Oil and Gas Leases

All lease and/or unit operations will be conducted in such a manner that full compliance is made with applicable laws, regulations (43 CFR 3100), Onshore Oil and Gas No. 1, and the approved plan of operations. The operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished the field representative to insure compliance.

1. **Formation Tops**

The estimated tops of important geologic markers are as follows:

<u>Formation</u>	<u>Depth</u>
Uinta	Surface
Green River	2,469'
Wasatch	5,779'
Mesaverde	8,639'
Sego	11,114'
Castlegate	11,229'
Blackhawk	11,563'
Mancos Shale	12,005'
Mancos B	12,440'
Frontier	15,085'
Dakota Silt	15,957'
Dakota	16,157'
TD	16,525'

2. **Anticipated Depths of Oil Gas Water and Other Mineral Bearing Zones**

The estimated depths at which the top and bottom of the anticipated water, oil, gas. Or other mineral bearing formations are expected to be encountered are as follows:

<u>Substance</u>	<u>Formation</u>	<u>Depth</u>
Gas	Wasatch	5,779'
Gas	Mesaverde	8,639'
Gas	Blackhawk	11,563'
Gas	Mancos Shale	12,005'
Gas	Mancos B	12,440'
Gas	Dakota	16,157'

All fresh water and prospectively valuable minerals encountered during drilling will be recorded by depth and adequately protected. All oil and gas shows will be tested to determine commercial potential.

DRILLING PROGRAM

All water shows and water-bearing sands will be reported to the BLM in Vernal, Utah. Copies of State of Utah form OGC-8-X are acceptable. If flows are detected, samples will be submitted to the BLM along with any water analyses conducted. Fresh water will be obtained from Wonsits Valley water right # A36125 (which was filed on May 7, 1964,) or Red Wash water right # 49-2153 (which was filed on March 25, 1960). It was determined by the Fish and Wildlife Service that any water right number filed before 1989 is not depleting to the Upper Colorado River System, to supply fresh water for drilling purposes. All water resulting from drilling operations will be disposed of at Red Wash Central Battery Disposal Site; SWSE, Section 27, T7S, R23E or Wonsits Valley Disposal Site; SWNW, Section 12, T8S, R21E.

3. Operator's Specification for Pressure Control Equipment:

- A. 13-5/8" 5000 psi double gate, 5,000 psi annular BOP (schematic included) from surface hole to 9-5/8" casing point. A 13-5/8" 10,000 psi double and single gate may be substituted based on contractor availability and substructure height of the drilling rig.
- B. 11" or 13-5/8" 10,000 psi double gate, 10,000 psi single gate, 10,000 psi annular BOP (schematic included) from 9-5/8" casing point to total depth. The choice of BOP stacks is based on the drilling contractor's availability.
- C. Functional test daily
- D. All casing strings shall be pressure tested (0.2 psi/foot or 1500 psi, whichever is greater) prior to drilling the plug after cementing; test pressure shall not exceed the internal yield pressure of the casing.
- E. Ram type preventers and associated equipment shall be tested to approved stack working pressure if isolated by test plug or to 50 percent of internal yield pressure of casing whichever is less. BOP and related equipment shall meet the minimum requirements of Onshore Oil and Gas Order No. 2 for equipment and testing requirements, procedures, etc..., for a 10M system and individual components shall be operable as designed.

DRILLING PROGRAM

4. **Casing Design:**

Hole Size	Csg. Size	Top (MD)	Bottom (MD)	Wt.	Grade	Thread	Cond.
26"	20"	sfc	40-60'	Steel	Cond.	None	Used
17-1/2"	13-3/8"	sfc	500'	54.5	K-55	STC	New
11"	9-5/8"	sfc	8500'	47	HCP-110	Flush Jnt **	New
8-1/2"	7"	8000'	12,100'	29* SDrift	HCP-110	LTC	New
6-1/8"	4-1/2"	sfc	13,700'	15.1	P-110	LTC	New
6-1/8"	4-1/2"	13,700'	16,525'	15.1	Q-125	LTC	New

Casing Strengths:				Collapse	Burst	Tensile (minimum)
13-3/8"	54.5 lb.	K-55	STC	1,130 psi	2,730 psi	547,000 lb.
9-5/8"	47 lb.	HCP-110	LTC	7,100 psi	9,440 psi	1,213,000 lb.
7"	29 lb.*	HCP-110	LTC	9,200 psi	11,220 psi	797,000 lb.
4-1/2"	15.1 lb.	P-110	LTC	14,350 psi	14,420 psi	406,000 lb.
4-1/2"	15.1 lb.	Q-125	LTC	15,840 psi	16,380 psi	438,000 lb.

* Special Drift

** Flush Jnt – VAM SLIJ II

MINIMUM DESIGN FACTORS:

COLLAPSE: 1.125

BURST: 1.10

TENSION: 1.80

Area Fracture Gradient: 0.9 psi/foot

Maximum anticipated mud weight: 15.4 ppg

Maximum surface treating pressure: 12,500 psi

DRILLING PROGRAM

5. Auxiliary Equipment

- A. Kelly Cock – yes
- B. Float at the bit – yes
- C. Monitoring equipment on the mud system – visually and/or PVT/Flow Show
- D. Full opening safety valve on the rig floor – yes
- E. Rotating Head – yes
If drilling with air the following will be used:
 - 1. The blooie line shall be at least 6" in diameter and extend at least 100' from the well bore into the reserve/blooie pit.
 - 2. Blooie line ignition shall be provided by a continuous pilot (ignited when drilling below 500').
 - 3. Compressor shall be tied directly to the blooie line through a manifold.
 - 4. A mister with a continuous stream of water shall be installed near the end of the blooie lines for dust suppression.

Surface hole will be drilled with air, air/mist, foam, or mud depending on hole conditions. Drilling below surface casing will be with water based drilling fluids consisting primarily of fresh water, bentonite, lignite, caustic, lime, soda ash and polymers. Oil based drilling mud will be used to drill the final section of the hole. The water based and oil based drilling system specifics are attached to this APD. Maximum anticipated mud weight is 15.4 ppg.

No minimum quantity of weight material will be required to be kept on location.

PVT/Flow Show will be used from base of surface casing to TD.

Gas detector will be used from surface casing depth to TD.

6. Testing, logging and coring program

- A. Cores – none anticipated
- B. DST – none anticipated
- C. Logging – Mud logging – 4500' to TD
GR-SP-Induction, Neutron Density, FMI

DRILLING PROGRAM

- D. Formation and Completion Interval: Mancos interval, final determination of completion will be made by analysis of logs.
Stimulation – Stimulation will be designed for the particular area of interest as encountered.

7. Cementing Program

20" Conductor:

Cement to surface with construction cement.

13-3/8" Surface Casing: sfc – 500' (MD)

Slurry: 0' – 500'. 610 sxs (731 cu ft) Premium cement + 0.25 lbs/sk Flocele + 2% CaCl₂
Slurry wt: 15.6 ppg, slurry yield: 1.20 ft³/sx, slurry volume: 17-1/2" hole + 100% excess.

9-5/8" Intermediate Casing: sfc – 8,500' (MD)

Lead Slurry: 0' – 8,100'. 1150 sks (301 bbls) Foamed Lead 50/50 Poz cement + 0.1 % FDP-C766-05 (Low Fluid Loss Control) + 5 #/sx Silicate Compacted + 20 % SSA-1 + 0.1 % Versaset + 1.5 % Zonesealant 2000 (Foamer) Slurry wt: 14.3 ppg, (unfoamed) or 11.0 ppg. (foamed) Slurry yield: 1.47 ft³/sk (unfoamed), Slurry volume: 12-1/4" hole + 35 % excess.

Tail Slurry: 8,100' – 8,500'. 115 sks (30 bbls) Tail 50/50 Poz cement + 0.1 % FDP-C766-05 (Low Fluid Loss Control) + 5 #/sx Silicate Compacted + 20 % SSA-1 + 0.1 % Versaset Slurry wt: 14.3 ppg, Slurry yield: 1.47 ft³/sk, Slurry volume: 12-1/4" hole + 35% excess.

7" Intermediate Casing: 8,000 - 12,100' (MD)

Foamed Lead Slurry 2: 8,000' – 12,100'. 409 sks (650 cu ft) 50/50 Poz Premium + 20% SSA-1 + 3 % silicalite compacted + 3% Silicalite Compacted + 0.5% Halad 344 + 0.2% Halad 413 + 0.1% HR-12 + 0.7% Super CBL + 0.2% Suspend Slurry wt: 14.0 ppg,, Slurry yield: 1.59 ft³/sk, Slurry volume: 8-1/2" hole + 25% excess.

4-1/2" Production Casing: sfc - 16,525' (MD)

Lead/Tail Slurry: 5,500 - 16,525'. 945 sks (1408 cu ft) Premium Cement + 17.5% SSA-1, + 4% Microbond HT, + 0.2% Halad 344 + 0.5% Halad 413, + 0.3% CFR-3, + 0.9% HR-12, + 0.2% Super CBL, + 0.2% Suspend HT, 17.5% SSA-2. Slurry wt: 16.2 ppg, Slurry yield: 1.49 ft³/sk, Slurry volume: 6-1/8" hole + 35% in open hole section.

*Final cement volumes to be calculated from caliper log with an attempt to be made to circulate cement to the surface on the intermediate string and 5,500' on the production string. A bond log will be run across the zone of interest and across zones as required by the authorized officer to insure protection of natural resources.

DRILLING PROGRAM

8. Anticipated Abnormal Pressures and Temperatures, Other Potential Hazards

No abnormal temperatures or pressures are anticipated. No H₂S has been encountered in or known to exist from previous wells drilled to similar depths in the general area. Maximum anticipated bottom hole pressure equals approximately 13,000 psi. Maximum anticipated bottom hole temperature is 305° F.

9. ADDITIONAL INFORMATION FOR OIL BASE MUD:

- A. See attached diagram of well pad layout. A reserve pit will be constructed for this location. This pit will be constructed so that a minimum of two vertical feet of freeboard exists above the top of the pit at all times and at least one-half of the holding capacity will be below ground level. The pit will be lined with a synthetic reinforced liner, 30 millimeters thick, with sufficient bedding used to cover any rocks prior to putting any fluids into the pit. The pad will be designed so that runoff from adjacent slopes does not flow into the reserve pit. The liner will overlap the pit walls and be covered with dirt and/or rocks to hold it in place. At the beginning of drilling operations this reserve pit will have an open-ended dike placed in the pit that allows the fluids to migrate from one side of the pit to the other during the drilling of the surface and intermediate hole using water based mud. At the time that operations begin to drill the production hole with oil base mud, this dike will be extended, dividing the pit into two distinct, isolated halves allowing no migration of fluids from one side to the other. At that time all fluids will be removed from the end of the pit to be used as a cuttings pit. This cuttings pit will be used for oil based cuttings generated during drilling of the production hole.
- B. Oil-base mud will be mixed in the closed circulating system and transferred to four 500-bbl tanks on location for storage prior to and after drilling operations. Drip pans will be installed below the rotary beams on the substructure and can be viewed on site from the cellar area. As the production section of the hole is drilled, the cuttings transported to the surface with the drilling fluid will be mechanically separated from the drilling fluid as waste by two shale-shakers and then cleaned/dried via a mud cleaner and/or centrifuge. These separated cuttings will be collected in a steel catch tank once they leave the closed circulating system and transported and placed into the cuttings half of the reserve pit.

DRILLING PROGRAM

- C. Plastic material will underlay the rig, oil base mud/diesel storage tanks and mud pits. All tanks on location will be placed inside of berms. Any oily waste fluids and sediments generated at the work site during drilling operations or when cleaning the fluid containment system after drilling will also be placed into the cuttings half of the pit.
- D. All rig ditches will be lined and directed to a lined sump for fluid recovery. A drip pan will be installed on the BOP stack, a mud bucket will be utilized as needed on connections and a vacuum system will be used on the rig floor for fluid recovery in those areas.
- E. Once all waste has been placed in the cuttings portion of the pit and all necessary approvals obtained, the oilfield waste management consultant Soli-Bond or a similar company will mobilize equipment and personnel to the site to perform the cement based solidification/stabilization process in-situ for encapsulation. Soil will be backfilled over the processed material used on the cuttings side of the pit and that portion of the pit area will be returned to the existing grade bordering the pit. Please see the attached Soli-Bond Proposal for Processing and Disposal of Drilling Waste for specific details. The half of the reserve pit containing water base materials will be left to evaporate and will be closed and reclaimed at the time that portion of the pit is dry.

10. Surface Ownership:

The well pad and access road are located on lands owned by:
Ute Tribe
PO Box 70
Ft. Duchesne, UT 84026

DRILLING PROGRAM

BOP Requirements:

13-5/8" Rotating Head

13-5/8" 5M Spacer Spool

13-5/8" 10M Annular

13-5/8" 10M Double Ram

13-5/8" 10M Mud Cross

2" Kill Line

3" Choke Line

13-5/8" 10M Single Ram

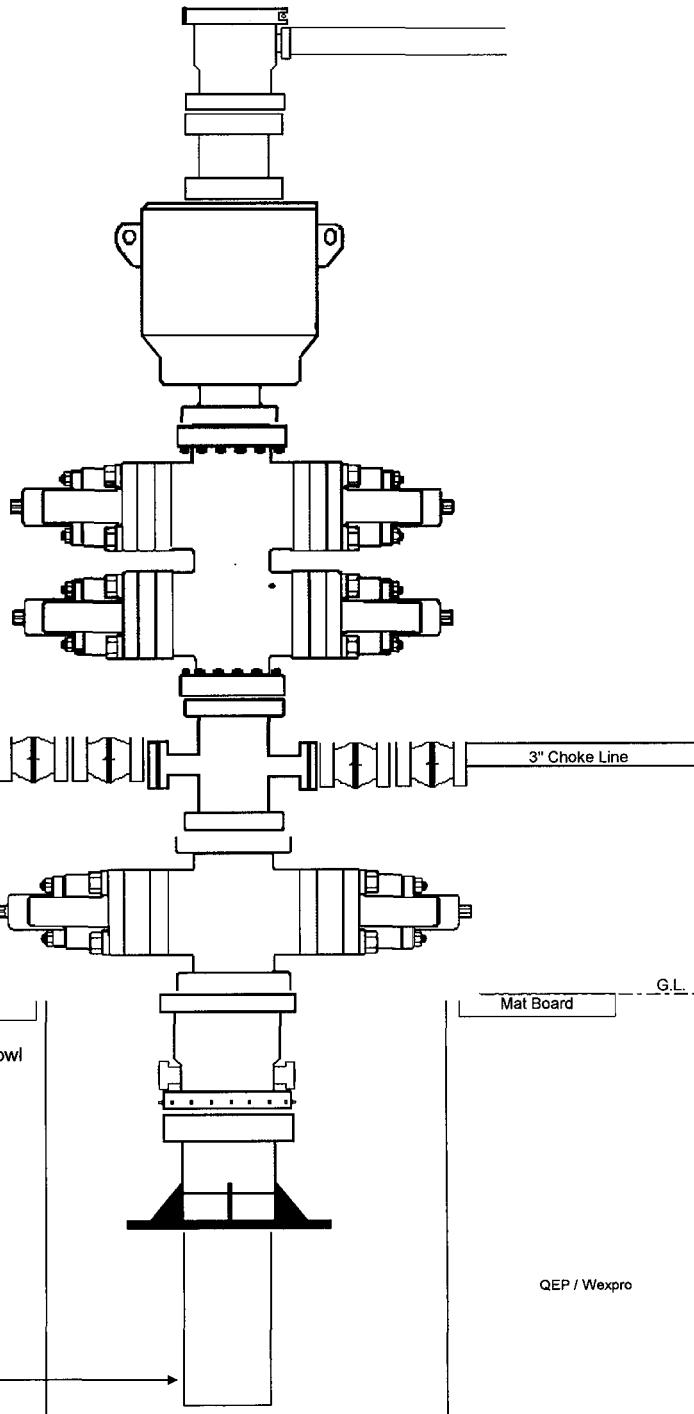
G.L. ---
Mat Board
13-5/8" 5M x 13-5/8" 10M Multi-Bowl
"B" Sect

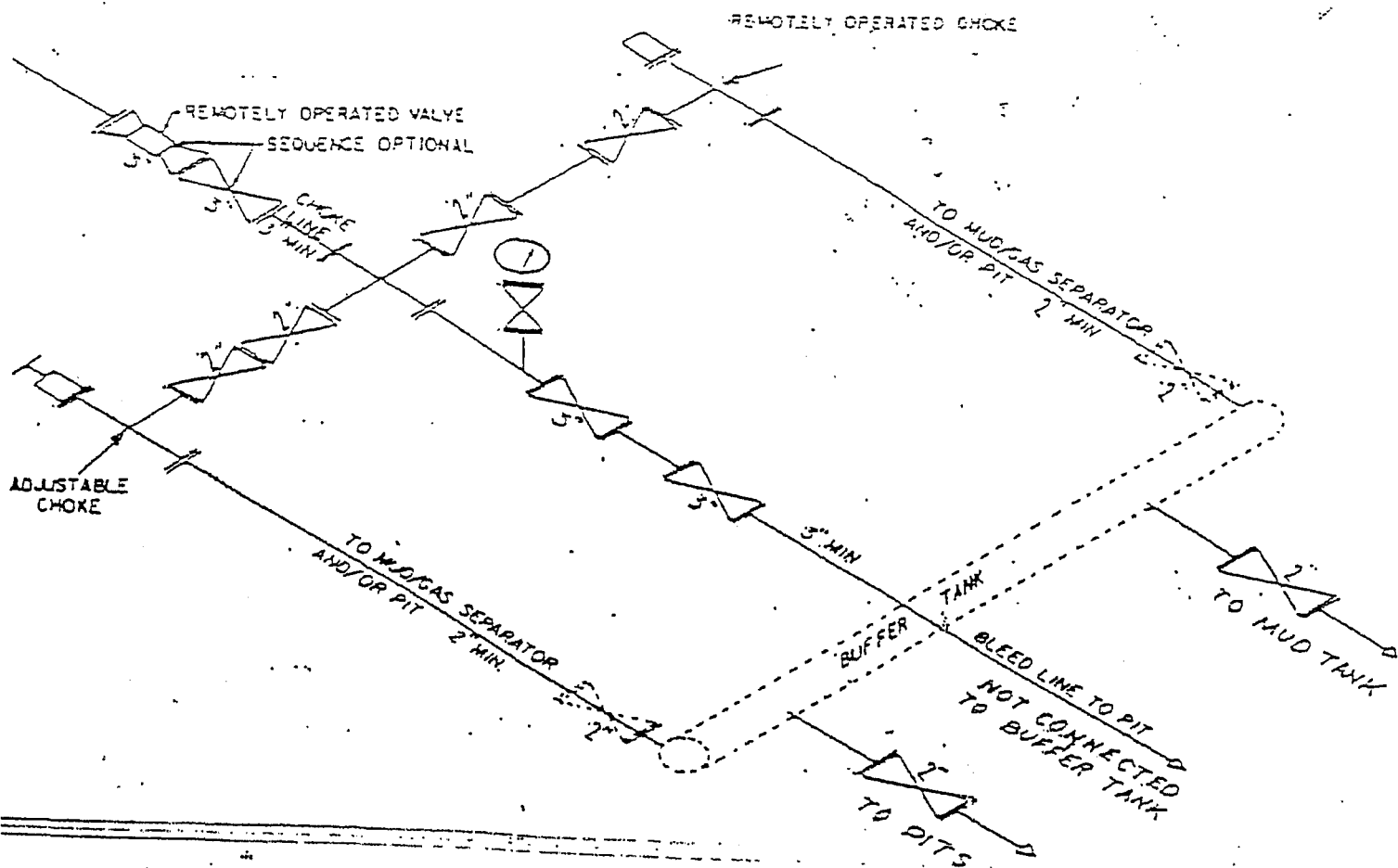
13-5/8" 5M "A" Section

Mat Board G.L. ---

13-3/8" 54.5# K55 Casing

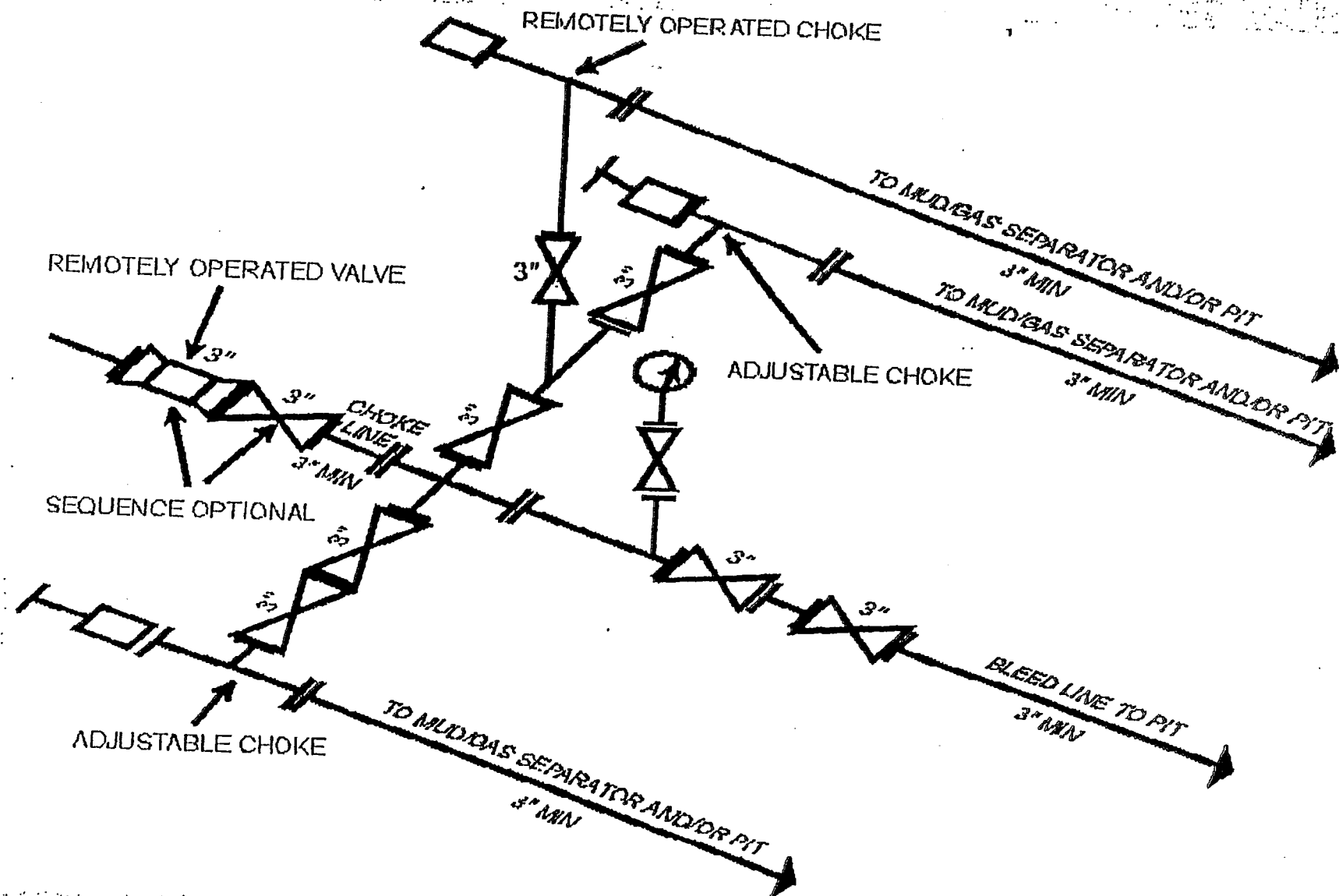
QEP / Wexpro





② 5M CHOKE MANIFOLD EQUIPMENT — CONFIGURATION OF CHOKES MAY VARY

Attachment I. Diagrams of Choke Manifold Equipment

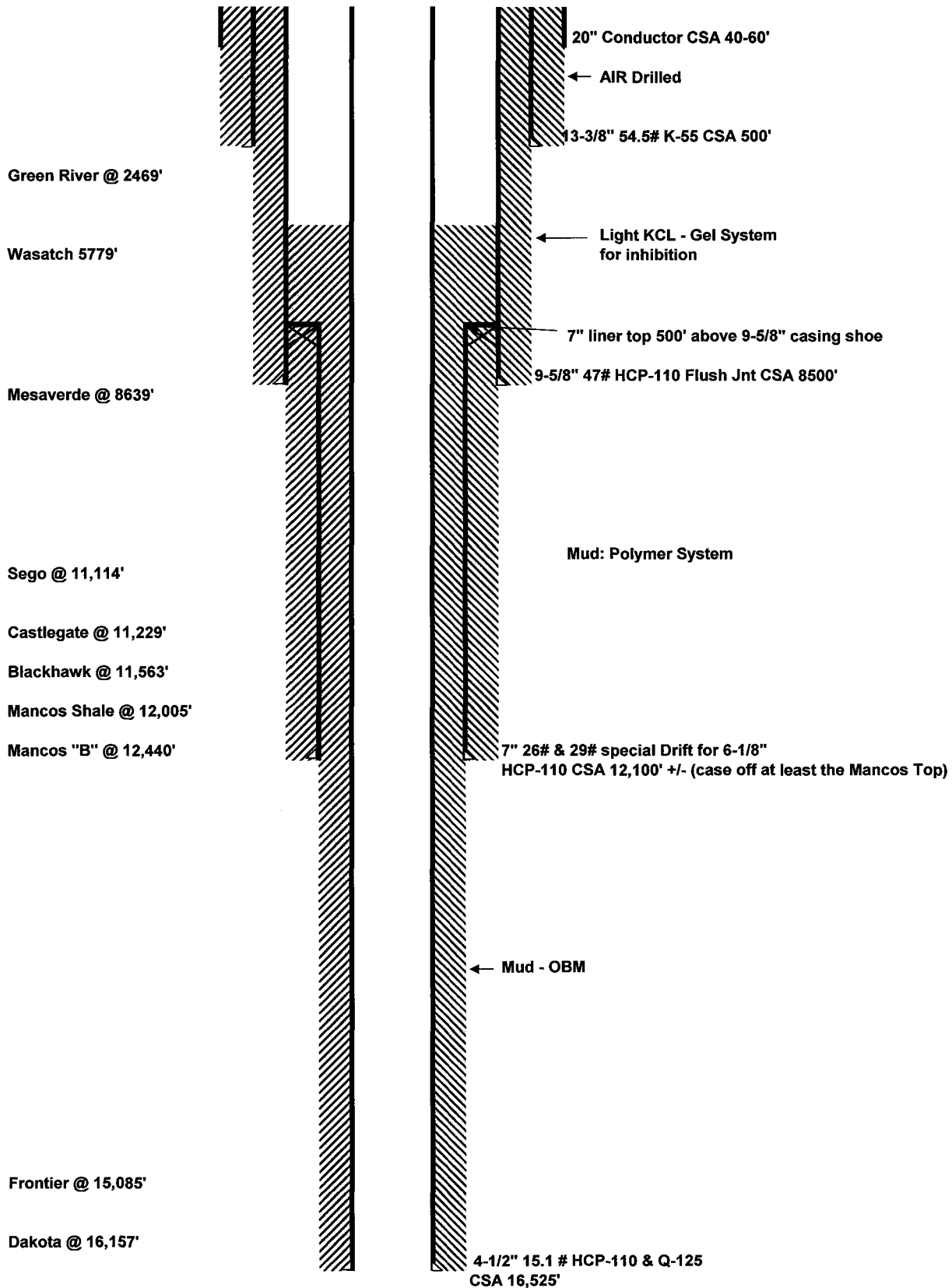


I-4 10M and 15M Choke Manifold Equipment -- Configuration of chokes may vary

[34 FR 39328, Sept. 27, 1989]

Last Updated March 25, 1997 by John Broderick

WV 15D-23-8-21





**Questar
Exploration &
Production Company**

WV 15D-23-8-21

***Sec 23-T8S-R23E
Uintah County, Utah***

Drilling Fluids Program

***410 17th Street, Suite 460 Denver, CO 80202
(303) 623-2205 (720) 904-7970 Fax***



Newpark Drilling Fluids, LP

410 17th Street, Suite 460

■ Denver, Colorado 80202

■ (303) 623-2205

■ FAX (720) 904-7970

August 9, 2007

Mr. Jim Davidson
Chief Drilling Engineer
Questar Exploration & Production
1331 17th Street, Suite 800
Denver, Colorado 80202

RE: WV 15D-23-8-21
Sec 23-T8S-R23E
Uintah Co, Utah

Mr. Davidson:

Newpark Drilling Fluids, LP is pleased to present the enclosed revised recommended drilling fluids program for the WV 15D-23-8-21 well to be drilled in Uintah County, Utah.

The Surface Interval will be drilled with air to a depth of 500 ft.

For the Intermediate Interval, it is recommended to drill out with 3% KCL water pumping NewGel sweeps as needed for hole cleaning. At 5500-5600 ft or before drilling into the Wasatch @ 5779', mud up to a 3% KCL/Polymer system. Trona water flows in this area may require a mud weight of 9.5 ppg to control. Use this fluid to casing point at 8,500'

In the Liner interval, drill out with the fluid from the previous interval. Discontinue additions of KCL. Allow KCL to deplete through dilution allowing the system to convert to a NewPHPA/Polymer system. Mud weight in this interval is expected to be in the 12.0-12.5 range at the 12,100 ft liner interval T.D.

In the Production interval, displace to a 12.0-13.0 ppg OptiDrill OBM system. Maintain fluid density as low as possible to increase penetration rates and reduce the possibility of lost circulation. Use high weight pills for well control during; trips, logs, and casing operations. Mud weight at T.D. is expected to be at +/-15.0 ppg.

The projected drilling time for this project is 65-70 days with an estimated material and engineering cost of \$500,000.00 assuming no unusual delays or problems are encountered. The estimate is based on minimal losses and a 15.0 ppg mud weight at TD. Costs will increase dramatically if severe losses are encountered.

All sack material and bulk barite will be furnished from our Grand Junction, Colorado facility, with OBM supplied from Newpark's Boulder, WY facility.

If you have any questions following your review of this proposal, please call.

Regards,

Estes Ward
Operations Manager
Newpark Drilling Fluids, LP

Project Summary

Questar
Exploration & Production
WV 15D-23-8-21
Sec 23-T8S-R23E
Uintah, County Utah

Depth (ft)	Formations	Interval Comments	Mud Weight (ppg)	Mud Properties
500'	Uinta Surface T.D.	Hole size: 17 1/2" / Casing: 13 3/8" AIR DRILLED	NA	NA
2,469'	Green River Mahogeny	KCL/NewPHPA Hole size: 11.0" / Casing: 9 5/8" Flush Joint Drill out with water, adding KCL for 2-3%. Pump pre-hydrated NewGel sweeps for hole cleaning. For seepage, incorporate fine LCM into the NewGel sweeps.	8.6	Vis (sec/qt): 28-40 PV (cp): 0-12
5,779'	Wasatch	Begin mud up operations at +/- 5500 ft or before drilling into the Wasatch. It is recommended to have the KCL % at 3.0 or > before drilling into the Wasatch.	9.0	YP (#s/100ft ²): 0-10 FL (ml/30 min): 8-10 LGS %: 3-5
8,500'	Intermediate T.D.	Maintain the fluid loss at 8 mls with AquaBloc/NewPac. Maintain rheology control with NewEdge, CFL II, and DrillThin. Maintain hardness at 100 mg/l or > with lime/Gyp additions. As seepage is encountered, pump LCM sweeps as conditions dictate. Mud weight at T.D. is expected to be in the 9.4-9.5 ppg range	9.5	pH: 10.0-10.5 Cl (mg/l): 11-15K KCL %: 2.5-3.0
8,639'	Mesa Verde	NewPHPA Hole size: 8.5" / Liner: 7"	9.8	Vis (sec/qt): 40-45 PV (cp) : 12-20
11,114'	Sego Bucktongue	Drill out, running fresh water, allowing the KCL % to drop. Maintain properties as recommended and increasing the PHPA concentration to 1.0 ppb.	10.4	YP (#s/100ft ²) : 10-12
11,229'	Castlegate	Lost circulation may be a problem in this interval. If lost circulation is encountered, pump LCM pills as needed. If LCM pills will not control losses, by-pass the shakers and increase the LCM concentration in the system as needed.	11.4	FL (ml/30 min): 6-8
11,563'	Blackhawk	If severe lost circulation is encountered, consider a DynaPlug squeeze.	11.6	LGS %: 3-5
12,005'	Mancos Shale	Hole instability may be encountered in the Mesa Verde. Monitor torque, pump pressure, connection fill, and trip conditions for indications of hole instability and consider adding Asphalt if hole conditions dictate.	12.4	pH: 10.0-10.5 Cl (mg/l): 11-15K KCL %: 0
12,100' +/-	Liner T.D.			
12,440' MD	Mancos B	OptiDrill OBM Hole size: 7.0" / Casing: 4-1/2" Drill out with the OptiDrill system, treating cement contamination as needed with OptiWet to prevent shaker blinding.	12.5	PV (cp): 25-35 YP (lbs/100ft ²): 8-10 HPHT (mls/30 min.): <20
15,085' MD	Frontier equiv.	Maintain hole cleaning during high ROP's with high viscosity sweeps. Use a 1:1 ratio of OptiVis RM and OptiVis.		O/W : 80:20 - 85:15
16,157' MD	Dakota Silt Dakota	CO2 in the gas stream while drilling under balanced will require additional Lime, emulsifiers and wetting agent.		ES: 500+
16,525' MD	Total Depth	Maintain mud weight as needed for well control. Spot high weight ECD pills for trips, logs, and casing operations.	15.5	Lime: 2-4 ppb LGS %: < 6



Newpark Drilling Fluids, LP

410 17th Street, Suite 460
 Denver, CO. 80202
 (303) 623-2205 FAX (720) 904-7970

Project Summary

Questar
Exploration & Production
WV 15D-23-8-21
Sec 23-T8S-R23E
Uintah, County Utah

DRILLING FLUID PROPERTIES

Surface Hole: Air Drilled

Hole Size (in)	TVD (ft)	Mud Weight (ppg)	Plastic Viscosity (cp)	Yield Point (lb/100ft ²)	API Fluid Loss (ml/30min)	Total Solids (%)
17 1/2 "	0-500'	NA	NA	NA	NA	NA

Intermediate Hole: KCL Water NewGel Sweeps - KCL/PHPA

Hole Size (in)	MD (ft)	Mud Weight (ppg)	Plastic Viscosity (cp)	Yield Point (lb/100ft ²)	API Fluid Loss (ml/30min)	KCL (%)	LGS Solids (%)
11"	500-5,500'	8.5-8.6	NA	NA	NA	2-3	< 1%
11 "	5,500'-8,500'	8.6-9.4	8-12	10-12	8-10	3.0	3-6

Liner Interval: NewPHPA

Hole Size (in)	MD (ft)	Mud Weight (ppg)	Plastic Viscosity (cp)	Yield Point (lb/100ft ²)	API Fluid Loss (ml/30min)	LGS Solids (%)
8 1/2 "	8,500'-12,100'	12.0-12.5	15-25	10-15	6-8	3-6

Production Interval: OptiDrill OBM

Hole Size (in)	MD (ft)	Mud Weight (ppg)	Plastic Viscosity (cp)	Yield Point (lb/100ft ²)	O/W Ratio (%)	HPHT Fluid Loss (ml/30min)	CaCL (mg/l) X 10,000	Electrical Stability (mv)	LGS Solids (%)
7.0 "	12,100'-16,525'	15.0-15.5	25-35	8-12	85/15	12-15	250-350	500 +	3-6

- Drilling fluid properties are guidelines only.
- Mud weights for guidelines only, allow hole conditions to dictate actual mud weights.
- Hole conditions should be closely monitored and product mix adjusted accordingly.



Newpark Drilling Fluids, LP

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Intermediate Interval

11" Hole (500' - 8,500')

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Exploration & Production
WV 15D-23-8-21
Sec 23-T8S-R23E
Uintah, County Utah

Intermediate Interval Drilling Fluid Properties

Depth Interval (TVD)	Mud Weight (ppg)	Viscosity (sec/qt)	Plastic Viscosity (cp)	Yield Point (lb/100ft ²)	pH	API Fluid Loss (ml/30min)	Hardness Mg/l)	Low Gravity Solids	KCL %
500'-5,500'	8.5-8.6	27-28	NA	NA	10.0-10.5	NA	100+	< 1.0	2.0-3.0
5,500'-8,500'	9.0-9.5	38-45	10-15	8-12	10.0-10.5	8-10	100+	3-6	3.0+

- Drill out mixing KCL for 3%. Pump pre-hydrated NewGel sweeps for additional hole cleaning and as hole conditions dictate. Add LCM to the sweeps for seepage.
- Mud up at 5,500 ft + to a KCL/Polymer system with properties as outlined above.
- If seepage is encountered, pump LCM sweeps as needed.
- Before drilling into the Wasatch, increase the KCL concentration to 3% or better.
- If Trona water is encountered, treat with Lime as needed for a 10.2 pH and 100 mg/l hardness.
- Mud weight at Intermediate T.D. is expected to be in the 9.2-9.4 ppg range.

<i>Challenges:</i>	<i>Strategies:</i>
Bit Balling	Use New Ease 203 (1-2 gal. down the drill pipe on connections) SAPP and Soap Sticks to prevent balling and to increase penetration rates.
Water Flows (Trona)	If water flows become excessive, mud up and increase mud weight as needed for control. Treat carbonate contamination with Lime/ Calcium Chloride as needed.
Lost Circulation	For seepage pump 50 bbl sweeps with 5-10 ppb DynaFiber and 10-20 ppb NewCarb as needed. For partial or total losses pump sweeps with 10-15 ppb FiberSeal and Cedar Fiber . If losses are not controlled with sweeps consider 10-15% LCM in active system. If losses are severe the use of a DynaPlug Squeeze is strongly recommended.
Differential Sticking	Maintain mud weight as low as possible. Control Low Gravity Solids below 6%, and control fluid loss at 8-10 mls/30 min.
Increase ROP with PDC Bits	Pump 20-40 bbl. Sweeps with NewEase 203, New100N, DynaDet, and SAPP. (FlexDrill Sweeps)
Hole Instability/Sloughing Shale	Consider additions of Asphalt at 4-6 ppb and/or Potassium Silicate at 1-2 ppb.



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Offset Data:

Some wells in this area have experienced losses in the Wasatch formation. LCM sweeps are strongly recommended for this reason. Mud weights should be kept as low as practical but increases to 9.5 ppg may be required to control the Trona Water flows which can be encountered from 3,000-4,000'.

Fluid Recommendations:

- Drill out cement, float collar and new formation. Test the integrity of the casing seat and squeeze if necessary.
- Close in pits and begin additions of **KCL**, **building to 3% before drilling the Wasatch**. Maintain **3% KCL** throughout the interval.
- If a Trona Water flow is encountered additions of **Lime** and/or **Calcium Chloride** should be used to adjust alkalinities as needed. An increase of mud weight to 9.5 may be necessary to control water flows in this area.
- The use of a premix tank is highly recommended. Pre-Hydrate **NewGel** for use as sweeps and for viscosity when a mud up is started at +/- 4,000'. Fill premix tank with fresh water. Treat out hardness with **SodaAsh** as needed. Add 0.25-0.5 ppb **Caustic Soda** for a 10.0-10.5 pH. Begin additions of 20-25 ppb **NewGel** allow sufficient circulating time for maximum hydration. Add 1.0-2.0 ppb **CFL II**. Then mix additional **NewGel** (30-40 ppb total) or a 120+ funnel viscosity. The pre-hydrated bentonite can be pumped from the premix to the pill tank and pumped downhole for sweeps or can be added slowly to the **3% KCL** water for viscosity and rheology control.
- At 5,500'-6,000' (or before drilling into the Wasatch formation) begin a mud up. Add pre-hydrated **NewGel** from the premix tank to the active system to increase funnel viscosity to 35-40 sec/qt. Maintain viscosity with pre-hydrated **NewGel** as needed. The system should be monitored and additions of **KCL** be adjusted to maintain **3% KCL**.
- Rheology can be enhanced with additions of .25-1.0 ppb **Flowzan** as needed.
- Reduce Fluid Loss to 8-10CC/30min with additions of 0.5-1.0 ppb **NewPAC** and/or 2-4 ppb **Aqua Bloc** by 5,500' and lower to 6-8 CC/30min prior to TD at 11,900'.
- If penetration rates slow sweeps with **New 100N**, **NewEase 203**, **SAPP**, and **DynaDet** should be considered. (1% **New 100N**, 1% **NewEase 203**, 0.5-0.75 ppb **SAPP**, 0.2 % **DynaDet**). "**Flex Sweeps**"
- If an increase in mud weight is necessary seepage and/or lost circulation may become a problem. For seepage pump 20-30 bbl pills containing a combination of **NewCarb** and **DynaFiber** mixed at a 2:1 ratio.
- If losses become severe, LCM sweeps of **Cedar Fiber** and **FiberSeal** should be considered and incorporated into the system as needed. If losses continue, increase coarse LCM in active system to 15-20%. If losses continue the use of a **DynaPlug** Squeeze is strongly recommended.
- At TD increase funnel viscosity for logs and casing operations as hole conditions dictate. Suggest funnel viscosity be increased to 45-50 sec/qt, before logging operations be attempted.



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Liner Interval

8 1/2" Hole (8,500' - 12,100')

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Sec 23-T8S-R23E
Uintah, County Utah

Liner Interval Drilling Fluid Properties								
Depth Interval (TVD)	Mud Weight (ppg)	Viscosity (sec/qt)	Plastic Viscosity (cp)	Yield Point (lb/100ft ²)	pH	API Fluid Loss (ml/30min)	Hardness Mg/l)	Low Gravity Solids
8,500' - 12,100'	12.0-12.5	40-50	18-25	10-15	10.0-10.5	6-8	100+	3-6

- After drilling out discontinue additions of KCL, allowing system to revert to a fresh water polymer system.
- As mud weight is increased, seepage losses can become severe. Treat with LCM pills as needed. If pill treatments will not contain the losses at reasonable levels, by-pass the shakers, retaining the pills and allowing the LCM concentration to increase as needed.
- Hole instability can occur in the Mesa Verde in this area. If encountered, consider adding Asphalt, building to a 4-6 ppb concentration.
- High pressure may be encountered in the Castlegate/Blackhawk. Monitor closely for increased pressure while drilling and use caution on trips to minimize possible swabbing.
- Mud weight at Liner Interval T.D. is expected to be in the 12.0-12.5 ppg range.

<i>Challenges:</i>	<i>Strategies:</i>
Hole Instability/Sloughing Shale	Consider 4-6 ppb Asphalt
Increase in Formation pressure	Monitor well conditions and increase density as needed with NewBar as needed.
Seepage/Lost Circulation	As mud weight is increased (10.0ppg +/-) seepage and losses may become a problem. For seepage pump 50 bbl sweeps with 5-10 ppb DynaFiber and 10-20 ppb NewCarb as needed. For partial or total losses pump sweeps with 10-15 ppb FiberSeal and Cedar Fiber . Severity of losses will determine size and quantity of LCM added. If losses are not controlled with sweeps consider 10-15% LCM in active system. For severe losses the use of a DynaPlug squeeze should be considered.
Differential Sticking	Maintain mud weight as low as possible. Control Low Gravity Solids below 6%, and control fluid loss at 8-10 mls/30 min.
Increase ROP with PDC Bits	Pump 20-40 bbl. Sweeps with NewEase 203, New100N, DynaDet, and SAPP. (FlexDrill Sweeps)



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Liner Interval

8 1/2" Hole (8,500' - 12,100')

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Offset Data:

Wells in this area have experienced losses as mud weights are increased to control formation pressure. LCM sweeps are strongly recommended for this reason. Mud weights should be kept as low as practical but increase to 12.5 ppg may be required by Liner TD at 12,100'.

Fluid Recommendations:

- Drill out cement, float collar and new formation with the system from the previous interval. Test the integrity of the casing seat and squeeze if necessary.
- Discontinue additions of **KCL**. Allow **KCL** to naturally dissipate by dilution with fresh water. Begin additions of 0.5-1.0 ppb **NewPHPA** and maintain throughout the interval.
- Maintain viscosity with PreHydrated **NewGel** until chlorides have dropped below 5000-7000 mg/l. After chlorides have dropped **NewGel** will not need to be pre-hydrated and can be added directly to the system.
- Begin additions of **NewPHPA**. Concentration of **NewPHPA** should be maintained at 0.5-1.0 ppb throughout the interval. As mud weight increases additions of **PHPA** should be switched from **NewPHPA DLMW** to the shorter chain **NewPHPA DSL**.
- If hole conditions dictate, consider 4-6 ppb Asphalt.
- If penetration rates slow sweeps with **New 100N**, **NewEase 203**, **SAPP**, and **DynaDet** should be considered. (1% **New 100N**, 1% **NewEase 203**, 0.5-0.75 ppb **SAPP**, 0.2 % **DynaDet**). "**Flex Sweeps**"
- Increase mud weight as needed to control formation pressures as needed. Mud weights should be maintained as low as practical to reduce chance of losses and differential sticking. Increase mud weight as needed with **NewBar**.
- As density increases additions of **NewEdge** and/or **DrillThin** should be added for rheology control.
- As bottom hole temperatures increase and additional fluid loss control is desired supplement the **NewPAC** with **DynaPlex** for fluid loss control. Lower API filtrate to 6-8 cc's with additions of **NewPAC** and **DynaPlex**.
- As mud weight is increased seepage and/or lost circulation may become a problem. For seepage pump 20-30 bbl pills containing a combination of **NewCarb** and **DynaFiber** mixed at a 2:1 ratio. If partial or total returns are encountered, LCM sweeps with a varied size distribution including **Cedar Fiber** and **Fiber Seal**, **PhenoSeal** and other assorted sizes should be considered and incorporated into the system as needed. 20-25% LCM in the active system may be required. The type, size and quantity of LCM used will depend on the severity of losses. If losses are severe a **DynaPlug** squeeze should be considered.
- At TD increase funnel viscosity for logs and casing operations as hole conditions dictate. Suggest funnel viscosity be increased to 50-55 sec/qt, before logging or casing operations be attempted.
- While circulating casing it is recommended to reduce Yield Points for cementing operations.



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Production Interval

6 1/8" Hole (12,100'-16,525')

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Uintah, County Utah

Production Interval Drilling Fluid Properties

Depth Interval (TVD)	Mud Weight (ppg)	Plastic Viscosity (cp)	Yield Point (lb/100ft ²)	O/W Ratio %	HTHP Fluid Loss (ml/30min)	Excess Lime (PPB)	Electrical Stability (MV)	Low Gravity Solids	CaCl Mg/l Water
12,100'-16,525'	15.0-15.5	25-35	8-10	85:15	12-15	2-4	500+	< 6	300K

Drilling Fluid Recommendations: (12,100'-16,525')

- Displace to a OptiDrill OBM after finishing the liner job at 12,100'.
- After displacement, maintain the OptiDrill system within the parameters outlined above.
- Offsets in the area have encountered high rates of seepage in this interval. If indications of seepage are observed, sweeps of **NewCarb C**, **Dynafiber C & M**, **NewSeal**, and **CyberSeal** are recommended. Mixing ratios are recommended to be at 5:1 **NewCarb M** to **DynaFiber**, **NewSeal**, and **CyberSeal**. If losses continue to be a problem, consider trying different sizes and combinations until seepage is slowed.
- Maintain rheology low to reduce ECD values and reduce surge and swab during connections and trips.
- Drill as underbalanced as possible to help prevent losses and increase penetration rates.
- For pressure control, spot high weight pills with an equivalent mud weight to drilling ECD's. On trips in, stage these pills out and divert to storage for further use. High weight pills in excess of the drilling ECD should be avoided due to possible lost circulation.

Challenges	Strategies
Displacement	<ul style="list-style-type: none"> • Have 1200-1300 bbls of OBM volume on location along with a pump capable of keeping up with displacement rates. • Pump a 10-20 bbl viscosified OBM spacer ahead of the OptiDrill (enough for 500 ft + separation) • A steady pump rate for either turbulent or plug flow should be used. Reciprocate and rotate to assist in minimizing channeling. • Do not shut down once displacement commences. • Should any contamination occur, isolate the contaminated fluid for reconditioning.
Seepage/lost Circulation.	Pump LCM sweeps when seepage and/or losses are indicated. Sweeps should be a mixture of , NewCarb, DynaFiber, NewSeal, and CyberSeal. If lost returns are encountered, consider a Diaseal M or cross linked polymer squeeze.
Maintaining Oil wet solids	For every 1.0 ppg mud weight increase, mix 0.02 gal/bbl OptiWet
Pressure control	<ul style="list-style-type: none"> • Spot weighted pills calculated to give a bottom hole pressure equal to drilling ECD. • Do not exceed drilling bottom hole pressure with the ECD pill. Lost circulation has been a problem on offset wells. • Stage weighted pills out of the hole and recover for future use.



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Production Interval

6 1/8" Hole (12,100'- 16,575')

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Maintenance Procedure:

HPHT - Maintain HPHT values within programmed parameters. Additions of **OptiMul** and **OptiPlus**, at recommended concentrations should maintain the HTHP at recommended levels. If hole conditions indicate a need for lower HPHT values, **Opti G** at 2-4 ppb is recommended.

Electrical Stability— Electrical stability should be used as a guide not as an absolute in determining maintenance requirements. Actual values are not critical but should be observed for trends or changes. Decreases in electrical stability should be noted along with other mud properties to determine treatments. To increase electrical stability add emulsifiers and wetting agents **OptiMul** and **OptiPlus** or decrease water content.

Oil/Water Ratio - Maintain the oil/water ratio in the 90:10-80:20 range depending on mud weight and condition.. Higher water content will decrease the amount of **OptiVis** needed for rheology.

Mud weight - Maintain minimum fluid densities with solids equipment. Monitor hole conditions and all drilling parameters closely for indications of increases in formation pressures and adjust fluid densities accordingly. Drilling with a minimum amount of overbalance will reduce the possibility of losing returns and/or of differentially sticking the drill string. Mud weight on offset wells was in the 15.0-15.5 ppg range at T.D.

Rheology - Maintain solids as low as possible. Increase rheology as needed for hole cleaning with a combination of **OptiVis (Bentone 910)** and **Opti Vis RM** or **Opti Vis PS** and water content.

Lime - Maintain the excess Lime at 2-3 ppb excess.

Hole cleaning - Calculate rheology requirements based on ROP, pump rates and hole conditions. Adjust as needed .

Mud losses downhole—Monitor ECD's with Hy-Calc, maintaining the lowest values possible. If losses are encountered; sweeps containing **NewCarb**, **DynaFiber**, **Opti-G**, and **NewSeal** should be circulated to aid in the prevention of losses. If seepage losses continue and/or become severe, consider spotting a pill with **Magma Fiber (Fine & Regular)** and the above formulation. Keep the hole full at all times, and avoid excessive swabbing and/or surge actions when tripping.

Solids Control - Maintain low gravity solids at 4-6 % by volume. The high performance shakers should be equipped with the finest mesh screens that will handle the circulating volume and not cut barite out.

Water Contamination— Keep all water sources off the mud pits. If contamination occurs, treat with emulsifiers and Calcium Chloride as needed.



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Production Interval

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**Recommended materials for relaxed filtrate OptiDrill system :
(85:15 Oil/Water Ratio)**

Product	Function	Concentration
<i>NewBar</i>	Weighting material	As needed
<i>OptiVis</i>	Organophilic Clay / Viscosifier	2-4 ppb
<i>OptiMul</i>	Primary Emulsifier	2.0 ppb
<i>OptiPlus</i>	Secondary Emulsifier	4.0 gal/bbl.
<i>OptiVis RM</i>	Low End Rheology Modifier	0.1-0.2 ppb
<i>Calcium Chloride Water</i>	Internal Phase	10.0%-20.0 % by volume
<i>Calcium Chloride</i>	Salinity/Activity	300,000 - 350,000 mg/l
<i>OptiG</i>	Fluid Loss control Additive	1.0-4.0 ppb
<i>Lime</i>	Alkalinity Additive	5 ppb
<i>NewCarb M</i>	Loss Circulation Material	10.0 ppb
<i>NewCarb F</i>	Loss Circulation Material	As required
<i>DynaFiber</i>	Loss Circulation Material	As required



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OILFIELD WASTE MANAGEMENT PROPOSAL

For

Questar Market Resources

SOLI-BOND® Processing and Disposal of Drilling Waste

Batch Treatment

Wells: WV 15D-23-8-21

Section 23

T8S – R21E

Uintah County, Utah

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BATCH TREATMENT

QUESTAR • WV 15D-23-8-21

Uintah County, Utah

OVERVIEW

Soli-Bond, Inc. (SBI) proposes to utilize the SOLI-BOND® Process for the treatment of **Drilling Waste** on the **WV 15D-23-8-21** in Uintah County, Utah, which will be followed by onsite disposal of the processed material.

This proposal will serve to delineate the specifications and criteria for achieving the project objectives as required by **Questar Market Resources** (Client) and the appropriate regulatory entities.

GENERAL DESCRIPTION OF THE SOLI-BOND® PROCESS

The SOLI-BOND® Process involves the controlled addition of a non-toxic, chemically reactive, portland-cement-based reagent or reagents to a waste, followed by the mixing of the reagent with the waste to form homogeneous slurry similar to viscous mortar. Oily substances that may be present in the waste are broken up into small droplets or particles and dispersed throughout the reagent/waste mixture during the mixing phase of the process. After the mixing phase, an irreversible chemical reaction begins to occur between the reagent and water present (or added) in the waste, ultimately causing the reagent/waste mixture to be transformed into a solid granular material with a “soil-like” consistency, typically within 48 hours after processing. Any dispersed particles of oily substances within the processed material are *physically* locked in place or “micro-encapsulated” in their isolated state inside the reacted cementitious matrix, preventing them from re-coalescing and suddenly being released to the environment at significant rates. The same irreversible reaction *chemically* stabilizes various metals that may be present in the waste, primarily by transforming them into less soluble metal hydroxides and other chemical species, thus greatly reducing their mobility and availability to the surrounding environment as well. In summary The SOLI-BOND® Process reduces the leaching rate of target constituents of concern from a waste form to such a degree that they can no longer cause harm to health or the environment. The SOLI-BOND® Process is a waste treatment method more generally known as Solidification/Stabilization (S/S). S/S has been recognized and prescribed by the United States Environmental Protection Agency for many years as an effective technology for the treatment of waste containing various metals as well as non-volatile and semi-volatile organic substances.

INNOCUOUS WASTE APPLICATIONS

The SOLI-BOND® Process can also be applied to solidify innocuous oilfield wastes such as spent water based drilling fluids and physically unstable water based drill cuttings to avoid the increased difficulties typically associated with the disposal of liquid or semi-solid wastes. Irreversibly transforming the *physical* properties of an innocuous waste, from a liquid or semi-solid state that’s structurally unstable, into a solid, granular material with load bearing capability, can be the sole reason for using The SOLI-BOND® Process. In addition, the chemically driven transformation into a dry solid occurs quickly, with minimal volume addition and the process can accommodate waste with high fluid content. For oilfield waste pit applications, the process provides more rapid solidification of the pit contents, more room for the prescribed depth of soil cover and can greatly reduce the waiting period for the pit contents to dry sufficiently for pit closure as opposed to that required for conventional closure methods.

BATCH TREATMENT

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SITE AND APPLICATION DESCRIPTION

The subject work site is an area constructed for the drilling and production of the gas well covered in this proposal. The well plan contemplates the use of an oilbase drilling fluid during the drilling of the production section of the well. As this section of the well is drilled, cuttings will be generated, transported to the surface within the drilling fluid, then mechanically separated from the drilling fluid as waste. These separated cuttings are expected to contain elevated levels of adhered/absorbed hydrocarbons due to their prior contact with the oilbase drilling fluid. These “oilbase cuttings” will be collected in steel catch tanks provided by the Client as drilling progresses and then placed in the separate oil base cuttings pit.

In addition to the “oilbase cuttings” described above, oily waste fluids and sediments may be generated at the work site during drilling operations and after drilling is completed the drilling fluid containment system will be cleaned thus generating some oily cleaning waste as well. It is these oilbase cuttings, waste fluids and sediments and cleaning waste that comprise all the waste to be treated and disposed of under this proposal.

Based on Client information and allowing for well bore washout, decompression/expansion of the drilled cuttings and the adhered/absorbed drilling fluids (“WEF”), the total volume of waste to treat was estimated as follows:

WV 15D-23-8-21

4,425 feet of 6.125 inch diameter hole x WEF factor of 3:	484
Estimated additional sediments and cleaning waste:	<u>10,500</u>
Total Estimated Barrels of Waste to Treat:	10,984

SBI proposes to apply the SOLI-BOND® Process to the oilbase cuttings and other indicated waste from the well during drilling operations to achieve the following objectives:

- Permanently reduce the leaching rate of target constituents of concern from the treated material to within prescribed limits.
- Irreversibly solidify the physically unstable waste to allow onsite disposal and support of soil cover without subsidence.
- Accomplish treatment with minimal volume addition to minimize disposal cell size and facilitate required minimum space for soil cover.
- Achieve rapid solidification of the waste to allow prompt final disposal.

PRELIMINARY ACTIVITIES

SBI personnel collected a sample of waste similar in characteristics to the waste to be generated on the subject project. The waste sample was used to conduct bench scale SOLI-BOND® processing, which has been carried out to determine effective reagent formulations, reagent/waste mix ratios, pricing and other aspects of this proposal.

OPERATIONAL PLAN

SBI jobsite operations will be conducted as follows:

SOLI-BOND® Processing and Disposal of Drilling Waste
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- After drilling the oilbase section of the well, SBI will install the SOLI-BOND® Waste Processing System at the well site. The “oilbase cuttings” will be treated “in-situ” in the existing lined pit.
- SBI will mobilize personnel to the jobsite to process the waste that has accumulated in the lined oil base cuttings pit.
- Upon arrival at the jobsite, the SBI Site Foreman will conduct a Jobsite Safety Assessment with SBI crew, discussing all potential jobsite safety hazards, required personal safety gear and accident avoidance and conduct safety meetings with SBI crew prior to each day’s work throughout the project.
- SBI and Client Representative will verify the volume of waste to treat in each batch prior to process operations.
- SBI crew will then process the waste with the SOLI-BOND® Waste Processing System.
- Waste processing will be preformed during eight (8) hour daylight shifts. After daily onsite process operations are completed SBI personnel will prepare a SBI field ticket for Client Representative signature, indicating the volume of waste processed (in barrels).
- Components of The SOLI-BOND® Waste Processing System may remain at the jobsite until all waste to treat has been processed.
- After all waste is processed from the well, a composite sample of the processed material will be collected for laboratory analysis to verify that it complies with criteria under the section herein entitled “Performance Criteria.”
- SBI will utilize the existing lined pit as an on-site disposal cell sized to accommodate the processed oilbase cuttings and four (4) feet of soil cover after final reclamation of the drill site. Client has provided a plastic liner for the disposal cell, including installation. After achievement of performance criteria is verified, SBI will backfill the cell to the adjacent surface elevation thus constituting final disposal of the processed material. SBI will then demobilize equipment and personnel thus concluding SBI’s onsite operations.
- A SBI Waste Treatment and Disposal Report suitable for submittal to the appropriate regulatory agencies will then be prepared documenting all pertinent aspects of the project and will be submitted to the Client.

PERFORMANCE CRITERIA

The treated waste will comply with the following criteria:

1. Leachable Oil and Grease less than 10 mg/L.
2. Leachable Total Dissolved Solids to be less than 5000 mg/L and/or leachable salts below acceptable site-specific guidelines.

Compliance with the performance criteria will be certified by an accredited testing laboratory utilizing the appropriate tests as prescribed and will be documented in a final report submitted to Client and the appropriate regulatory agencies as required.

SCHEDULE (All time/days are estimates and may change due to jobsite conditions)

SOLI-BOND® Processing and Disposal of Drilling Waste

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QUESTAR • WV 15D-23-8-21

Uintah County, Utah

ITEM / SERVICE (Based on estimated 10,984 total barrels of waste to process)	ESTIMATED DAYS
Mobilization And Setup	1
Estimated SOLI-BOND® PWD Waste Processing System Rental Days	15
Process Material, Backfill Cell	12
Takedown and Demobilization	1

ITEMS FURNISHED with SOLI-BOND® PWD Waste Processing System

Equipment

- SB-2-7 Processor
- SOLI-BOND® Reagent Storage Silo w/ Discharge Auger
- Back Hoe Loader
- Ancillary Equipment
- First Aid and Safety Equipment
- SBI Crew Transportation

Personnel

- *SBI Site Foreman*
- *SBI Operator Material*
- Fuel necessary to operate Soli-Bond's motorized equipment.

Miscellaneous

- SBI Equipment Cleaning.
- One Laboratory Analysis of Processed Material. (for parameters indicated herein)
- SBI Waste Treatment and Disposal Report.

CLIENT RESPONSIBILITY

- Client will provide SBI with a written work order or other Client recognized document to contract SBI to perform the work as described herein.
- Client will provide SBI with a list of any Client requirements related to performing and being compensated for the work described herein.
- Client will provide "all weather" ingress and egress to the site.
- Client will provide process add-mix water.
- Client agrees that delays or interruptions in SBI's work described herein caused by "Acts of Nature" or events under the responsibility of the Client or Client contractors (excluding SBI and it's contractors) may result in additional charges to Client.

QUESTAR EXPLORATION & PRODUCTION, CO.
WV 15D-23-8-21
668' FSL 1994' FEL
SWSE, SECTION 23, T8S, R21E
UINTAH COUNTY, UTAH
LEASE # UTU-025963

ONSHORE ORDER NO. 1

MULTI – POINT SURFACE USE & OPERATIONS PLAN

1. **Existing Roads:**

The proposed well site is approximately 11 miles from Ouray, Utah.

Refer to Topo Maps A and B for location of access roads within a 2 – mile radius.

2. **Planned Access Roads:**

Refer to Topo Map B for the location of the proposed access road.

3. **Location of Existing Wells Within a 1 – Mile Radius:**

Please refer to Topo Map C.

4. **Location of Existing & Proposed Facilities:**

Refer to Topo Map D for the location of the proposed pipeline.

5. **Location and Type of Water Supply:**

Fresh water will be obtained from Wonsits Valley water right # A36125 (which was filed on May 7, 1964,) or Red Wash water right # 49-2153 (which was filed on March 25, 1960). It was determined by the the Fish and Wildlife Service that any water right number filed before 1989 is not depleting to the Upper Colorado River System, to supply fresh water for drilling purposes.

6. **Source of Construction Materials:**

Surface and subsoil materials in the immediate area will be utilized. Any gravel will be obtained from a commercial source. The use of materials under BLM jurisdiction will conform with 43 CFR 3610.2-3.

7. **Methods of Handling Waste Materials:**

Drill cuttings will be contained and buried in the reserve pit. Drilling fluids, including salts and chemicals, will be contained in the reserve pit. Upon termination of drilling and completion operations, the liquid contents of the reserve pit will be used at the next drill site or will be removed and disposed of at an approved waste disposal facility with 90 days after drilling is terminated. Immediately upon well completion, any hydrocarbons in the pit shall be removed in accordance with 43 CFR 3162.7-1.

After first production, produced wastewater will be confined to the approved pit or storage tank for a period not to exceed 90 days. During the 90 day period, in accordance with Onshore Order #7, all produced water will be contained in tanks on location and then hauled to Wonsits Valley location in SWNW Sec. 12, T8S, R21E; or Red Wash Disposal Well located in NESW, Sec. 28, T7S, R22E or, Red Wash Central Battery Disposal located in SWSE, Section 27, T7S, R23E. Pit reclamation for lined pit will be ruptured when emptied to allow the remaining liquid to be adequately mixed and to promote additional drying of the pit area.

See additional information for oil base mud under the Drilling Program # 9.

8. Ancillary Facilities:

None anticipated.

9. Well Site Layout: (See Location Layout Diagram)

The attached Location Layout Diagram describes drill pad cross-sections, cuts and fills and locations of the mud tanks, reserve pit, flare pit, pipe racks, trailer parking, spoil dirt stockpile(s), and surface material stockpile(s).

Please see the attached diagram to describe rig orientation, parking areas, and access roads.

A Pit liner is required felt if rock encountered.

10. Plans for Reclamation of the Surface:

Topsoil will be stripped and salvaged to provide for sufficient quantities to be respread to a depth of at least 4 to 6 inches over the disturbed areas to be reclaimed. Topsoil shall be stock piled separately from subsoil materials. Topsoil salvaged from the reserve pit shall be stockpiled separately near the reserve pit. Immediately upon well completion, the location and surrounding area will be cleared of all unused tubing, materials, trash, and debris not required for production. Alternatively, the pit will be pumped dry, the liner folded into the pit, and the pit backfilled. The reserve pit will be reclaimed within 120 days from the date of well completion, weather permitting.

11. Surface Ownership:

The well pad and access road are located on lands owned by:

Ute Tribe
P.O. Box 70
Fort Duchesne, UT 84026

12. Other Information:

A Class III archaeological survey was conducted by Montgomery Archaeology Consultants. A copy of this report was submitted directly to the appropriate agencies by Montgomery Archaeology Consultants. Cultural resource clearance was recommended for this location.

Lessee's or Operator's Representative:

Jan Nelson
Red Wash Rep.
Questar Exploration & Production, Co.
11002 East 17500 South
Vernal, Utah 84078
(435) 781-4331

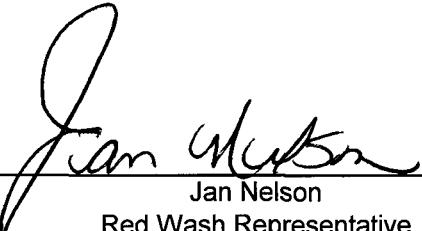
Certification:

All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil & Gas Orders, the approved plan of operations, and any applicable Notice to Lessees.

QEP will be fully responsible for the actions of their subcontractors.

A complete copy of the approved Application for Permit to Drill will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by QEP it's contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.



Jan Nelson
Red Wash Representative

25-Sep-07
Date

QUESTAR EXPLR. & PROD.

WV #15D-23-8-21

LOCATED IN UINTAH COUNTY, UTAH
SECTION 23, T8S, R21E, S.L.B.&M.

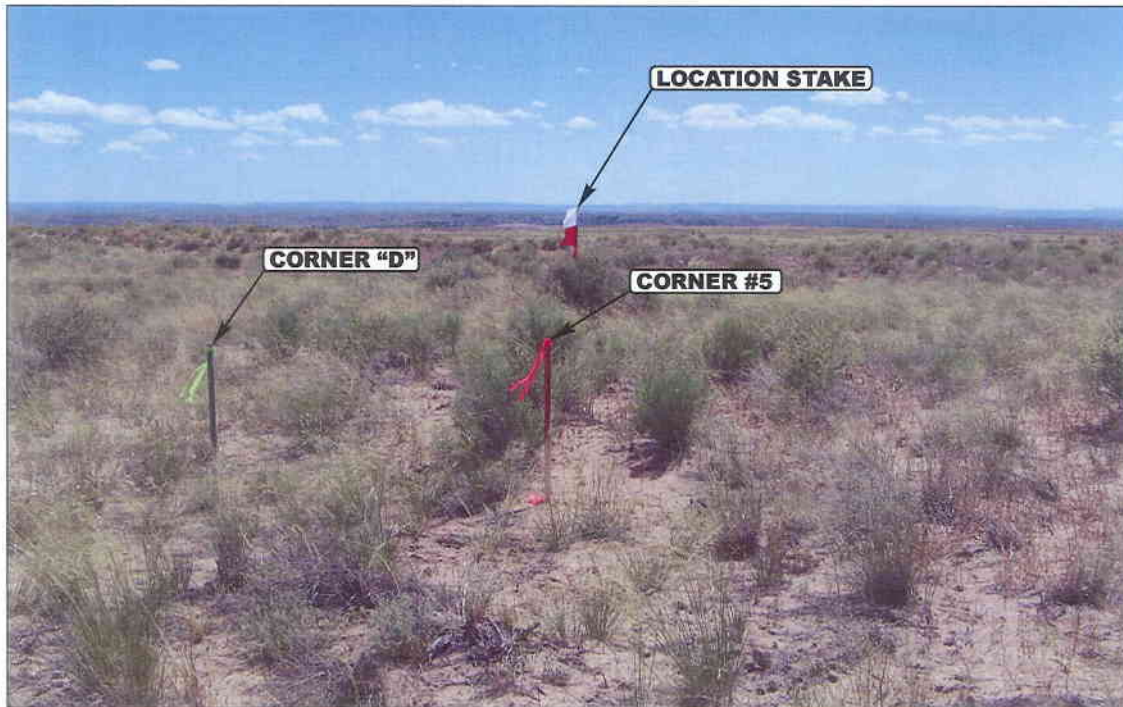


PHOTO: VIEW FROM CORNER #5 TO LOCATION STAKE

CAMERA ANGLE: SOUTHWESTERLY



PHOTO: VIEW FROM BEGINNING OF PROPOSED ACCESS

CAMERA ANGLE: SOUTHEASTERLY



UELS Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
435-789-1017 uels@uelsinc.com

LOCATION PHOTOS

06 01 07
MONTH DAY YEAR

PHOTO

TAKEN BY: D.A.

DRAWN BY: A.A.

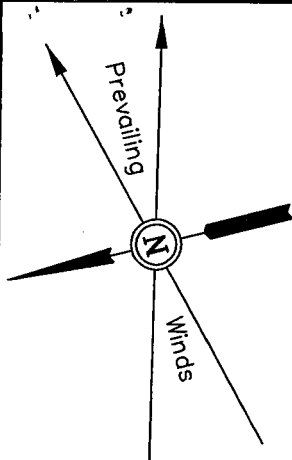
REVISED: 00-00-00

QUESTAR EXPLR. & PROD.

LOCATION LAYOUT FOR

WV #15D-23-8-21
SECTION 23, T8S, R21E, S.L.B.&M.
668' FSL 1994' FEL

FIGURE #1



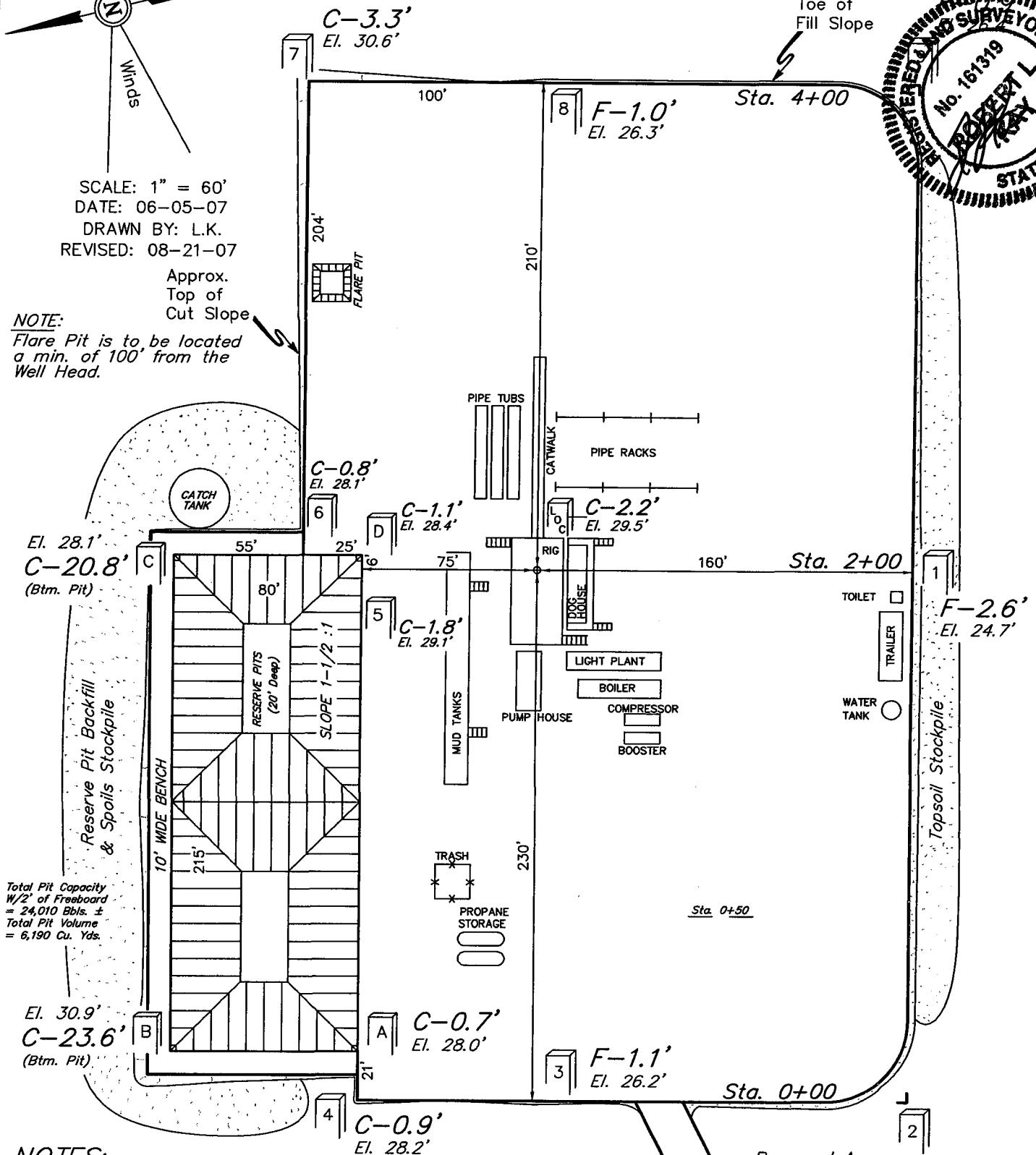
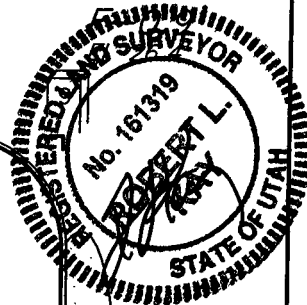
SCALE: 1" = 60'
DATE: 06-05-07
DRAWN BY: L.K.
REVISED: 08-21-07

Approx.
Top of
Cut Slope

NOTE:

Flare Pit is to be located
a min. of 100' from the
Well Head.

Approx.
Toe of
Fill Slope



NOTES:

Elev. Ungraded Ground At Loc. Stake = 4829.5'
FINISHED GRADE ELEV. AT LOC. STAKE = 4827.3'

UINTAH ENGINEERING & LAND SURVEYING
85 So. 200 East * Vernal, Utah 84078 * (435) 789-1017

QUESTAR EXPLR. & PROD.

TYPICAL CROSS SECTIONS FOR

WV #15D-23-8-21

SECTION 23, T8S, R21E, S.L.B.&M.

668' FSL 1994' FEL

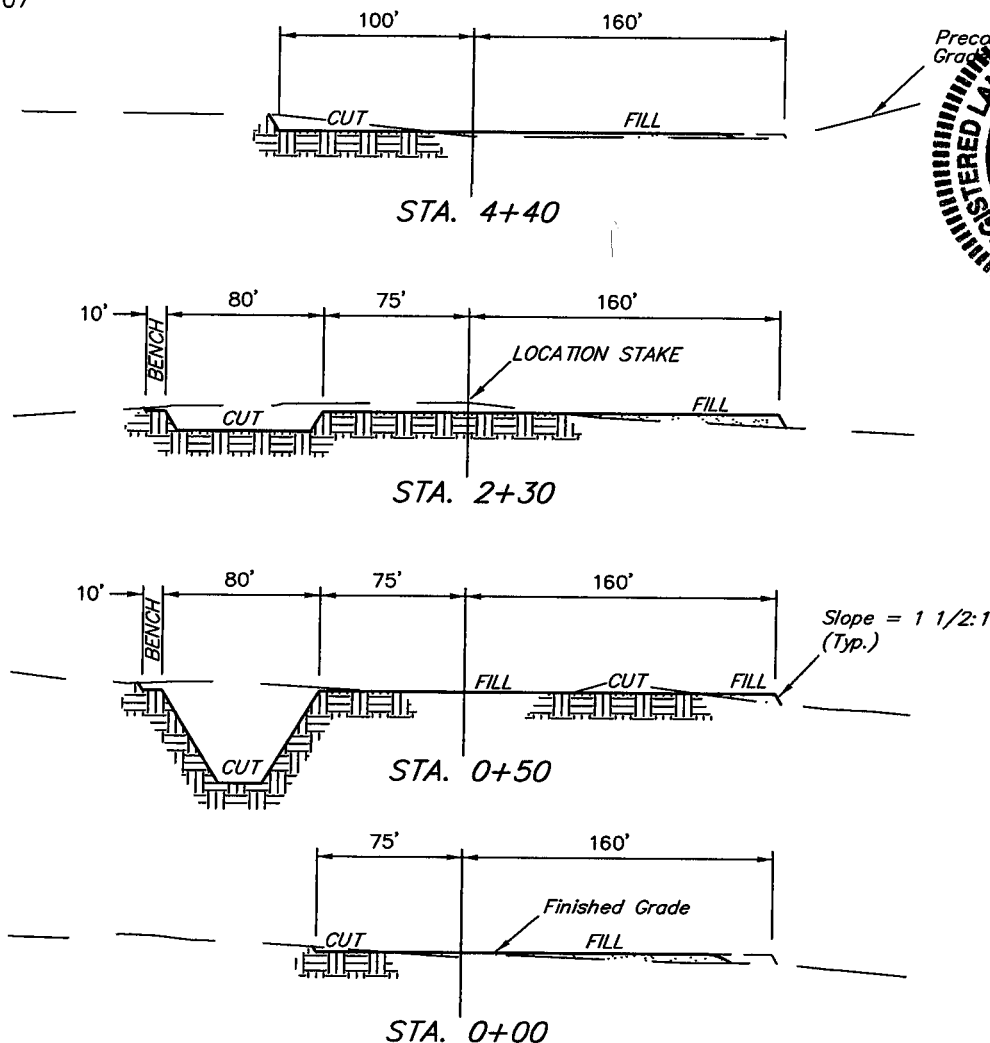
FIGURE #2

1" = 20'
X-Section
Scale
1" = 50'

DATE: 06-05-07

DRAWN BY: L.K.

REVISED: 08-21-07



APPROXIMATE ACREAGES

WELL SITE DISTURBANCE = ± 3.961 ACRES

ACCESS ROAD DISTURBANCE = ± 1.494 ACRES

PIPELINE DISTURBANCE = ± 1.648 ACRES

TOTAL = ± 7.103 ACRES

NOTE:

Topsoil should not be Stripped Below Finished Grade on Substructure Area.

* NOTE:

FILL QUANTITY INCLUDES 5% FOR COMPACTION

APPROXIMATE YARDAGES

CUT

(12") Topsoil Stripping = 5,060 Cu. Yds.

Remaining Location = 7,770 Cu. Yds.

TOTAL CUT = 12,830 CU.YDS.

FILL = 4,670 CU.YDS.

EXCESS MATERIAL = 8,160 Cu. Yds.

Topsoil & Pit Backfill (1/2 Pit Vol.) = 8,160 Cu. Yds.

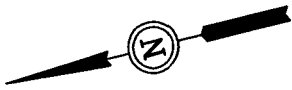
EXCESS UNBALANCE = 0 Cu. Yds. (After Interim Rehabilitation)

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85 So. 200 East * Vernal, Utah 84078 * (435) 789-1017

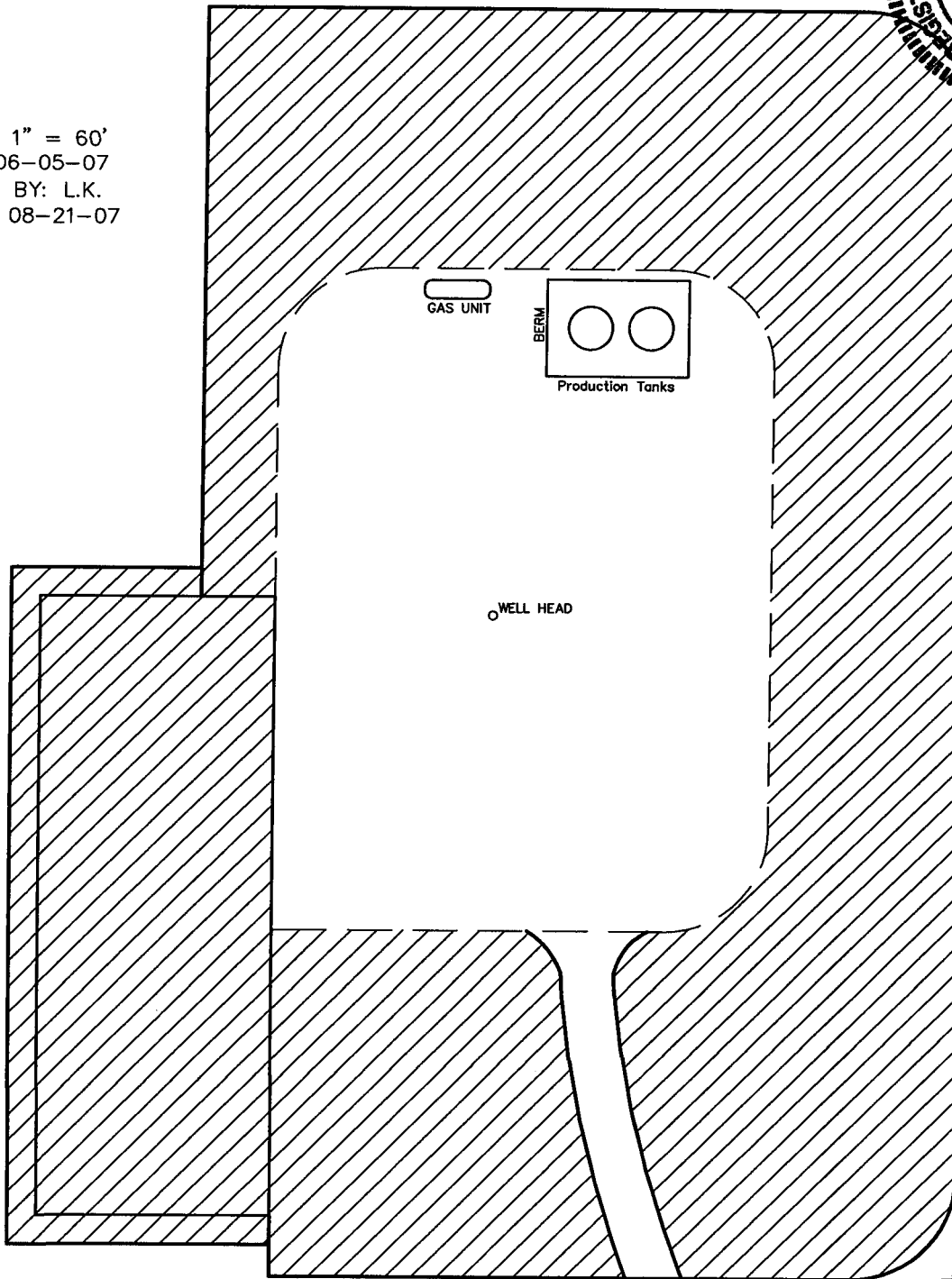
QUESTAR EXPLR. & PROD.
INTERIM RECLAMATION PLAN FOR

FIGURE #3

WV #15D-23-8-21
SECTION 23, T8S, R21E, S.L.B.&M.
668' FSL 1994' FEL

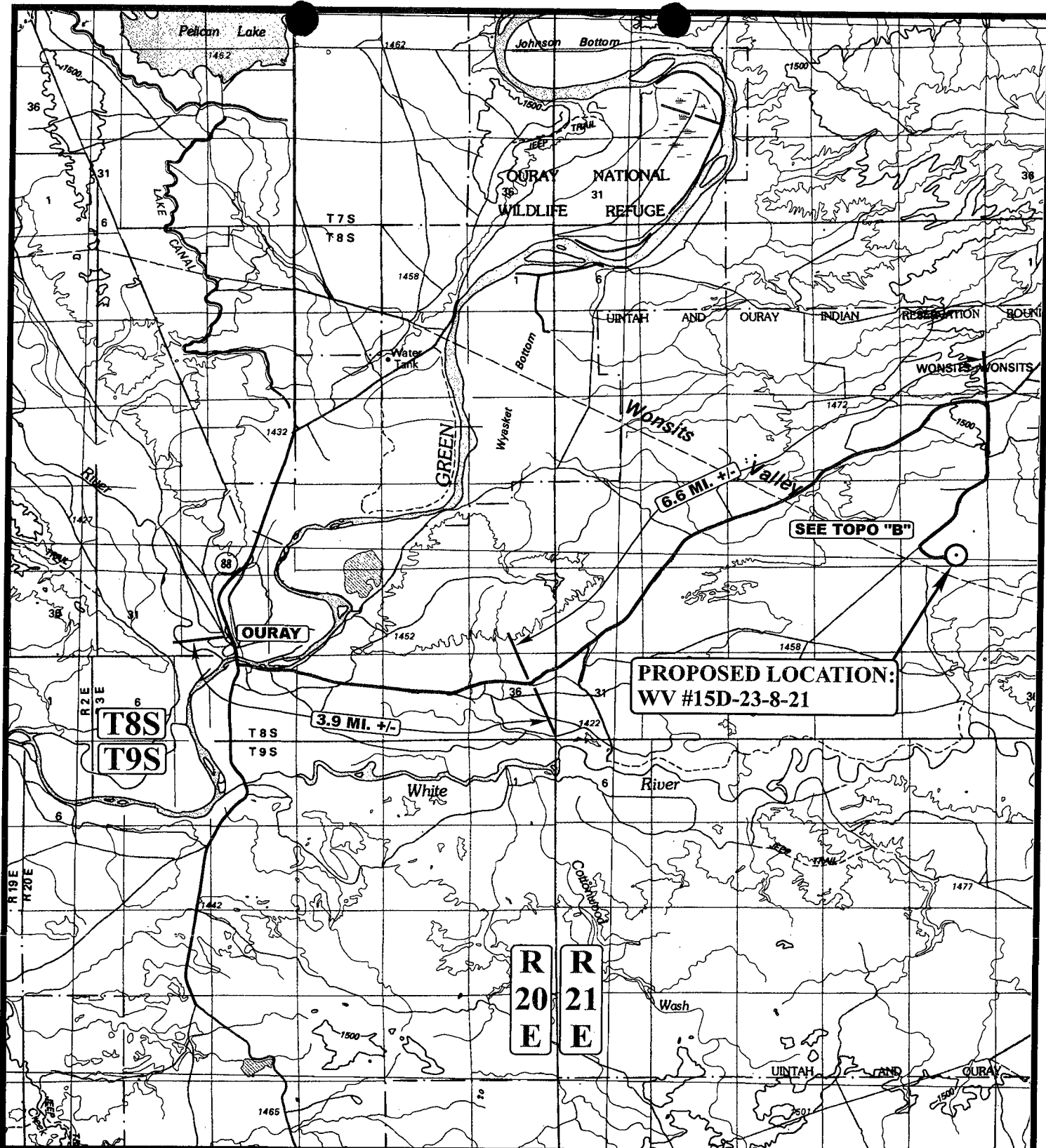


SCALE: 1" = 60'
DATE: 06-05-07
DRAWN BY: L.K.
REVISED: 08-21-07



 INTERIM RECLAMATION

UINTAH ENGINEERING & LAND SURVEYING
85 So. 200 East * Vernal, Utah 84078 * (435) 789-1017



LEGEND:

○ PROPOSED LOCATION

N

QUESTAR EXPLR. & PROD.

WV #15D-23-8-21

SECTION 23, T8S, R21E, S.L.B.&M.

668' FSL 1994' FEL



Uintah Engineering & Land Surveying
 85 South 200 East Vernal, Utah 84078
 (435) 789-1017 * FAX (435) 789-1813

TOPOGRAPHIC
MAP

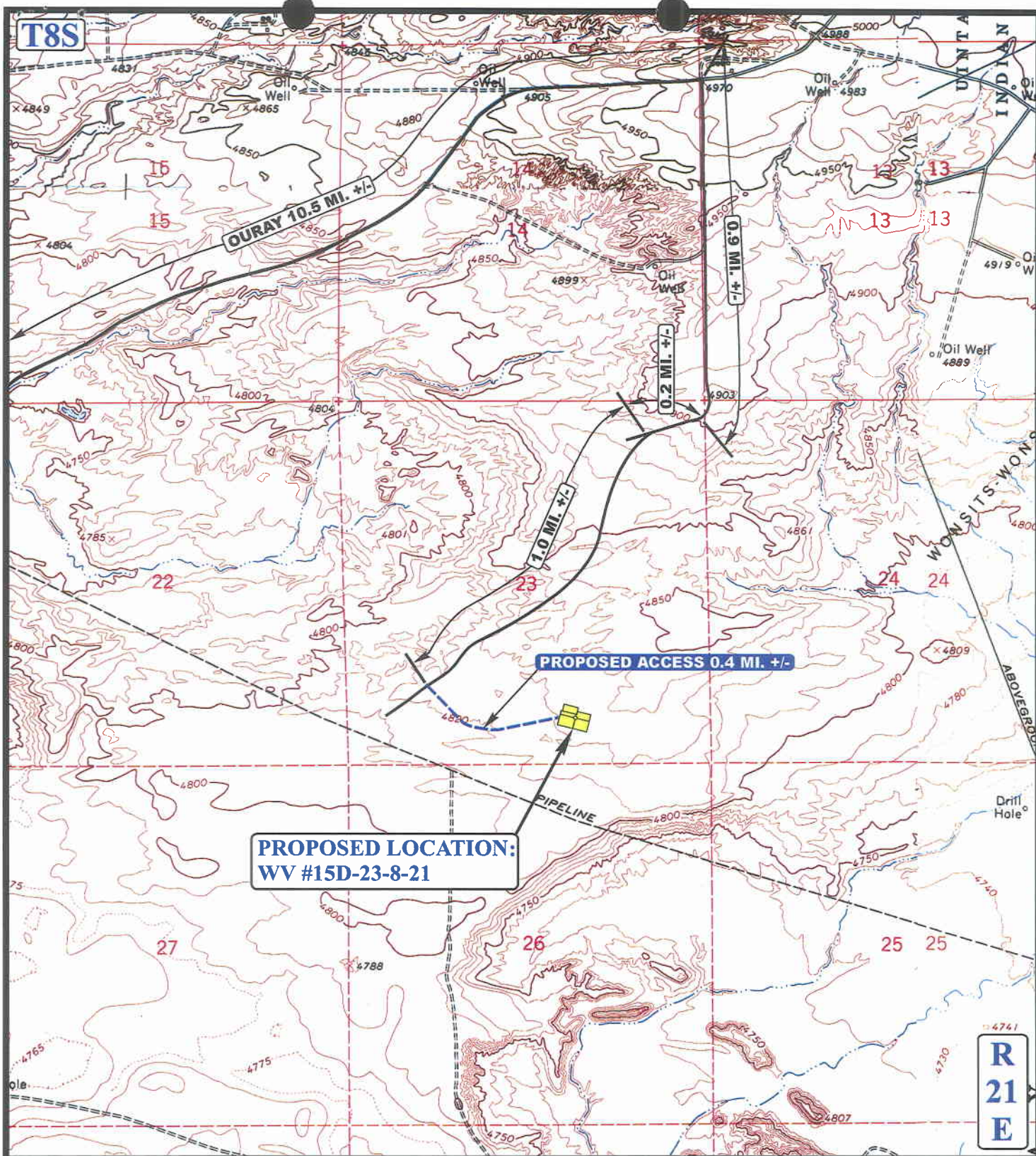
06 **01** **07**
 MONTH DAY YEAR

SCALE: 1:100,000

DRAWN BY: A.A.

REVISED: 00-00-00

A
TOPO



LEGEND:

EXISTING ROAD
 PROPOSED ACCESS ROAD

QUESTAR EXPLR. & PROD.

WV #15D-23-8-21
 SECTION 23, T8S, R21E, S.L.B.&M.
 668' FSL 1994' FEL



Uintah Engineering & Land Surveying
 85 South 200 East Vernal, Utah 84078
 (435) 789-1017 * FAX (435) 789-1813

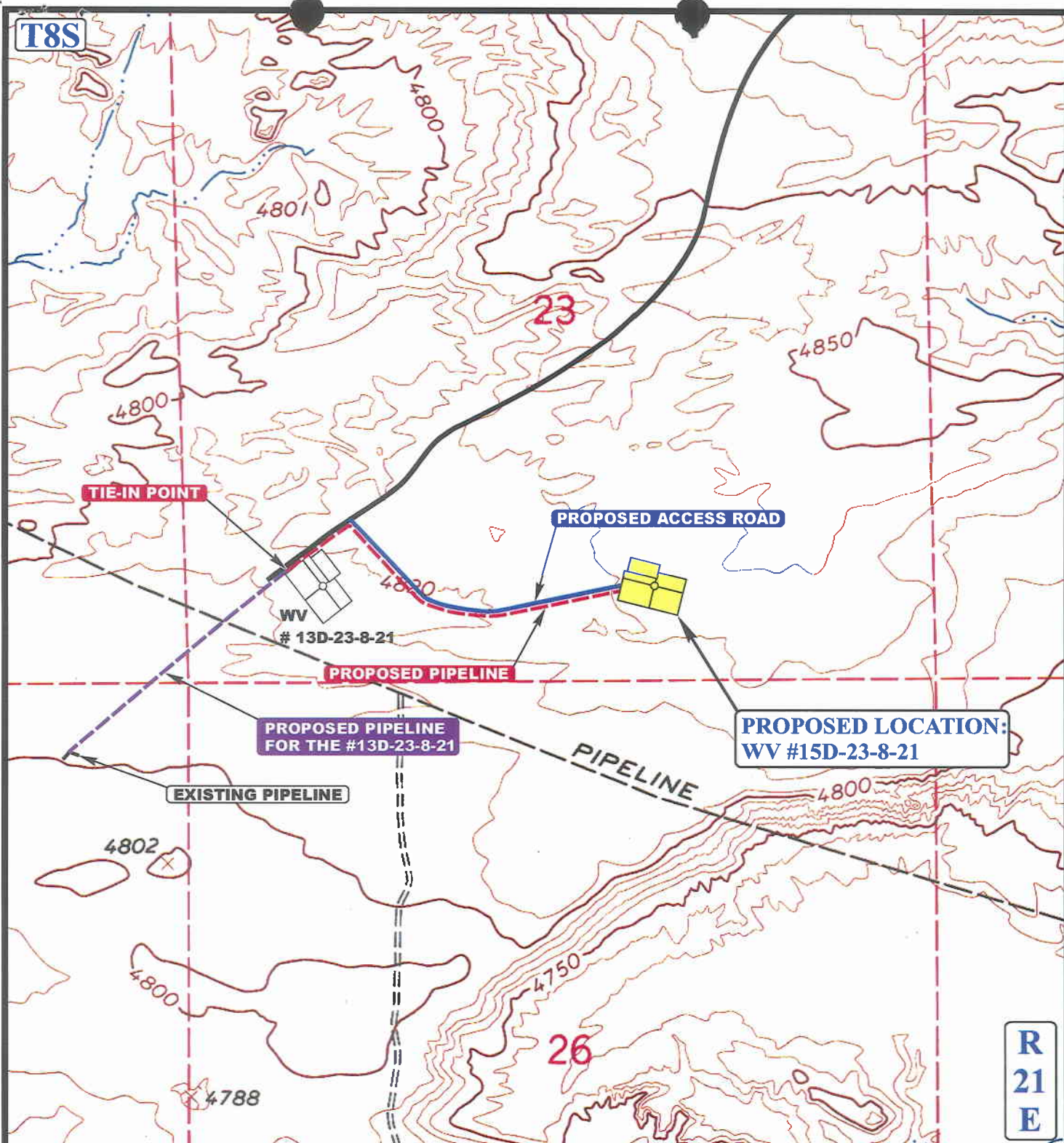


TOPOGRAPHIC
 MAP

06 01 07
 MONTH DAY YEAR

SCALE: 1" = 2000' DRAWN BY: A.A. REVISED: 00-00-00

B
 TOPO



APPROXIMATE TOTAL PIPELINE DISTANCE = 2,760' +/-

LEGEND:

- PROPOSED ACCESS ROAD
- EXISTING PIPELINE
- PROPOSED PIPELINE
- PROPOSED PIPELINE (SERVICING OTHER WELLS)



QUESTAR EXPLR. & PROD.

WV #15D-23-8-21
SECTION 23, T8S, R21E, S.L.B.&M.
668' FSL 1994' FEL



Uintah Engineering & Land Surveying
 85 South 200 East Vernal, Utah 84078
 (435) 789-1017 * FAX (435) 789-1813

TOPOGRAPHIC
MAP

06 01 07
 MONTH DAY YEAR

SCALE: 1" = 1000' DRAWN BY: A.A. REVISED: 00-00-00



WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 09/27/2007

API NO. ASSIGNED: 43-047-39664

WELL NAME: WV 15D-23-8-21

OPERATOR: QUESTAR EXPLORATION & (N5085)

PHONE NUMBER: 435-781-4331

CONTACT: JAN NELSON

PROPOSED LOCATION:

SWSE 23 080S 210E

SURFACE: 0668 FSL 1994 FEL

BOTTOM: 0668 FSL 1994 FEL

COUNTY: UINTAH

LATITUDE: 40.10349 LONGITUDE: -109.5181

UTM SURF EASTINGS: 626309 NORTHINGS: 4440086

FIELD NAME: WONSITS VALLEY (710)

INSPECT LOCATN BY: / /

Tech Review	Initials	Date
Engineering		
Geology		
Surface		

LEASE TYPE: 1 - Federal

LEASE NUMBER: UTU-025963

SURFACE OWNER: 2 - Indian

PROPOSED FORMATION: DKTA

COALBED METHANE WELL? NO

RECEIVED AND/OR REVIEWED:

☒ Plat
☒ Bond: Fed[1] Ind[] Sta[] Fee[]
(No. ESB000024)
☒ Potash (Y/N)
☒ Oil Shale 190-5 (B) or 190-3 or 190-13
☒ Water Permit
(No. 49-2153)
☒ RDCC Review (Y/N)
(Date:)
☒ Fee Surf Agreement (Y/N)
☒ Intent to Commingle (Y/N)

LOCATION AND SITING:

 R649-2-3.
Unit: _____
☒ R649-3-2. General
Siting: 460 From Qtr/Qtr & 920' Between Wells
 R649-3-3. Exception
 Drilling Unit
Board Cause No: _____
Eff Date: _____
Siting: _____
 R649-3-11. Directional Drill

COMMENTS: _____

STIPULATIONS: _____

1- Federal Approval
2- Spacing Study



JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil Gas and Mining

JOHN R. BAZA
Division Director

October 1, 2007

Questar Exploration & Production, Co.
11002 E 17500 S
Vernal, UT 84078

Re: WV 15D-23-8-21 Well, 668' FSL, 1994' FEL, SW SE, Sec. 23, T. 8 South, R. 21 East,
Uintah County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann. § 40-6-1 *et seq.*, Utah Administrative Code R649-3-1 *et seq.*, and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-047-39664.

Sincerely,

Gil Hunt
Associate Director

pab
Enclosures

cc: Uintah County Assessor
Bureau of Land Management, Vernal Office

Operator: Questar Exploration & Production, Co.
Well Name & Number WV 15D-23-8-21
API Number: 43-047-39664
Lease: UTU-025963

Location: SW SE **Sec.** 23 **T.** 8 South **R.** 21 East

Conditions of Approval

1. General

Compliance with the requirements of Utah Admin. R. 649-1 *et seq.*, the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

2. Notification Requirements

Notify the Division within 24 hours of spudding the well.

- Contact Carol Daniels at (801) 538-5284.

Notify the Division prior to commencing operations to plug and abandon the well.

- Contact Dustin Doucet at (801) 538-5281 office (801) 733-0983 home

3. Reporting Requirements

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

4. State approval of this well does not supersede the required federal approval, which must be obtained prior to drilling.

5. This proposed well is located in an area for which drilling units (well spacing patterns) have not been established through an order of the Board of Oil, Gas and Mining (the "Board"). In order to avoid the possibility of waste or injury to correlative rights, the operator is requested, once the well has been drilled, completed, and has produced, to analyze geological and engineering data generated therefrom, as well as any similar data from surrounding areas if available. As soon as is practicable after completion of its analysis, and if the analysis suggests an area larger than the quarter-quarter section upon which the well is located is being drained, the operator is requested to seek an appropriate order from the Board establishing drilling and spacing units in conformance with such analysis by filing a Request for Agency Action with the Board.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE*

FORM APPROVED
OMB NO. 1040-0136
Expires: February 28, 1995

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

TYPE OF WORK

DRILL ☒

DEEPEN ☐

TYPE OF WELL

☐

☒

☐

☒

☐

OIL WELL

GAS WELL

OTHER

SINGLE
ZONE

MULTIPLE
ZONE

2. NAME OF OPERATOR

QUESTAR EXPLORATION & PRODUCTION, CO.

Contact: Jan Nelson

E-Mail: jan.nelson@questar.com

3. ADDRESS

11002 E 17500 S VERNAL, UT 84078

Telephone number

Phone 435-781-4331 Fax 435-781-4395

4. LOCATION OF WELL (Report location clearly and in accordance with and State requirements*)

At Surface

668' FSL 1994' FEL, SWSE, SECTION 23, T8S, R21E

At proposed production zone

14. DISTANCE IN MILES FROM NEAREST TOWN OR POSTOFFICE*

11 +/- MILES EAST OF OURAY, UTAH

15. DISTANCE FROM PROPOSED LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT.
(also to nearest drig, unit line if any)

668' +/-

16. NO. OF ACRES IN LEASE

280.00

18. DISTANCE FROM PROPOSED location to nearest well, drilling,
completed, applied for, on this lease, ft

19. PROPOSED DEPTH

16,525'

9. API NUMBER:

43-047-39664

10. FIELD AND POOL, OR WILDCAT
NATURAL BUTTES

11. SEC., T, R, M, OR BLK & SURVEY OR AREA

SEC. 23, T8S, R21E Mer SLB

12. COUNTY OR PARISH

Uintah

13. STATE

UT

17. NO. OF ACRES ASSIGNED TO THIS WELL

40

21. ELEVATIONS (Show whether DF, RT, GR, ect.)

4829.5' GR

22. DATE WORK WILL START

ASAP

23. Estimated duration

70 Days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

1. Well plat certified by a registered surveyor.

2. A Drilling Plan

3. A surface Use Plan (if location is on National Forest System Lands,
the SUPO shall be filed with the appropriate Forest Service Office).

4. Bond to cover the operations unless covered by an existing bond on file (see
Item 20 above).

5. Operator certification.

6. Such other site specific information and/or plans as may be required by the
authorized officer.

SIGNED

Jan Nelson

Name (printed/typed) Jan Nelson

DATE 9-25-07

TITLE

Regulatory Affairs

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

Application approval does not warrant or certify the applicant holds any legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon

CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY

Steve Thompson

TITLE

Assistant Field Manager
Lands & Mineral Resources

DATE 11-20-2007

*See Instructions On Reverse Side

VERNAL FIELD OFFICE

United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction

NOTICE OF APPROVAL

CONDITIONS OF APPROVAL

RECEIVED

ATTACHED

CONFIDENTIAL

DEC 05 2007

DIV. OF OIL, GAS & MINING

NOS 7/24/07
07PP2510A



UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VERNAL FIELD OFFICE

170 South 500 East

VERNAL, UT 84078

(435) 781-4400



CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL

Company: Questar Exploration & Production Co.
Well No: WV 15D-23-8-21
API No: 43-047-39664

Location: SWSE, Sec 23, T8S, R21E
Lease No: UTU-025963
Agreement: N/A

Title	Name	Office Phone Number	Cell Phone Number
Petroleum Engineer:	Matt Baker	(435) 781-4490	(435) 828-4470
Petroleum Engineer:	Michael Lee	(435) 781-4432	(435) 828-7875
Petroleum Engineer:	James Ashley	(435) 781-4470	(435) 828-7874
Petroleum Engineer:	Ryan Angus	(435) 781-4430	(435) 828-7368
Supervisory Petroleum Technician:	Jamie Sparger	(435) 781-4502	(435) 828-3913
NRS/Enviro Scientist:	Paul Buhler	(435) 781-4475	(435) 828-4029
NRS/Enviro Scientist:	Karl Wright	(435) 781-4484	(435) 828-7381
NRS/Enviro Scientist:	Holly Villa	(435) 781-4404	
NRS/Enviro Scientist:		(435) 781-4476	
NRS/Enviro Scientist:	Chuck MacDonald	(435) 781-4441	(435) 828-7481
NRS/Enviro Scientist:	Jannice Cutler	(435) 781-3400	(435) 828-3544
NRS/Enviro Scientist:	Michael Cutler	(435) 781-3401	(435) 828-3546
NRS/Enviro Scientist:	Anna Figueroa	(435) 781-3407	(435) 828-3548
NRS/Enviro Scientist:	Verlyn Pindell	(435) 781-3402	(435) 828-3547
NRS/Enviro Scientist:	Darren Williams	(435) 781-4447	
NRS/Enviro Scientist:	Nathan Packer	(435) 781-3405	(435) 828-3545

Fax: (435) 781-3420

**A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR
FIELD REPRESENTATIVE TO INSURE COMPLIANCE**

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. **This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.**

NOTIFICATION REQUIREMENTS

Location Construction (Notify NRS/Enviro Scientist)	-	Forty-Eight (48) hours prior to construction of location and access roads.
Location Completion (Notify NRS/Enviro Scientist)	-	Prior to moving on the drilling rig.
Spud Notice (Notify Petroleum Engineer)	-	Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify Supervisory Petroleum Technician)	-	Twenty-Four (24) hours prior to running casing and cementing all casing strings
BOP & Related Equipment Tests (Notify Supervisory Petroleum Technician)	-	Twenty-Four (24) hours prior to initiating pressure tests
First Production Notice (Notify Petroleum Engineer)	-	Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days

***SURFACE USE PROGRAM
CONDITIONS OF APPROVAL (COAs)***

Surface COAs:

- If there is an active Gilsonite mining operation within 2 miles of the well location, operator shall notify the Gilsonite operator at least 48 hours prior to any blasting during construction.
- If paleontological materials are uncovered during construction, the operator is to immediately stop work and contact the Authorized Officer (AO). A determination will be made by the AO as to what mitigation may be necessary for the discovered paleontologic material before construction can continue.

Additional Stipulations:

- A 30 foot corridor right-of-way shall be approved. Upon completion of each pipeline in corridor, they shall be identified and filed with the Ute Tribe.
- A qualified Archaeologist accompanied by a Tribal Technician will monitor trenching construction of pipeline.
- The Ute Tribe Energy & Minerals Department is to be notified, in writing 48 hours prior to construction of pipeline.
- Construction Notice shall be given to the department on the Ute Tribe workdays, which are Monday through Thursday. The Company understands that they may be responsible for costs incurred by the Ute Tribe after hours.
- The Company shall inform contractors to maintain construction of pipelines within the approved ROWs.
- The Company shall assure the Ute Tribe that "ALL CONTRACTORS, INCLUDING SUB-CONTRACTORS, LEASING CONTRACTORS, AND ETC." have acquired a current and valid Ute Tribal Business License and have "Access Permits" prior to construction, and will have these permits in all vehicles at all times.
- You are hereby notified that working under the "umbrella" of a company does not allow you to be in the field, and can be subject to those fines of the Ute Tribe Severance Tax Ordinance.
- Any deviation of submitted APD's and ROW applications the Companies will notify the Ute Tribe and BIA in writing and will receive written authorization of any such change with appropriate authorization.
- The Company will implement "Safety and Emergency Plan." The Company's safety director will ensure its compliance.
- All Company employees and/or authorized personnel (sub-contractors) in the field will have approved applicable APDs and/or ROW permits/authorizations on their person(s) during all phases of construction.

- All vehicular traffic, personnel movement, construction/restoration operations should be confined to the area examined and approved, and to the existing roadways and/or evaluated access routes.
- All personnel should refrain from collecting artifacts, any paleontological fossils, and from disturbing any significant cultural resources in the area.
- The personnel from the Ute Tribe Energy & Minerals Department should be notified should cultural remains from subsurface deposits be exposed or identified during construction. All construction will cease.
- All mitigative stipulations contained in the Bureau of Indian Affairs Site Specific Environmental Assessment (EA) will be strictly adhered.
- Upon completion of Application for Corridor Right-Way, the company will notify the Ute Tribe Energy & Minerals Department, so that a Tribal Technician can verify Affidavit of Completion.

ADDITIONAL CONDITIONS OF APPROVAL:

- Paint tanks Desert Tan
- Apply rock and gravel on location
- Apply gravel on access road
- For any other additional stipulations, see concurrence letter.

DOWNHOLE CONDITIONS OF APPROVAL

SITE SPECIFIC DOWNHOLE CONDITIONS OF APPROVAL

- The operator is required to use '10,000' psi annular preventer for the specified BOP 10M system.
- A casing shoe integrity test shall be performed before Drilling more than twenty feet below the casing shoe on the intermediate and liner casing.
- Intermediate casing 9 5/8" cement shall be brought up and into the surface.
- For casing intermediate liner installation, casing liner is to be installed and tested to the standards of Onshore Order #2. The operator specified casing liner lap overlap interval length is 500 ft.
- Production casing cement shall be brought up and into the intermediate casing shoe 9 5/8". The minimum cement top is 1000 ft above the intermediate liner top 7".
- A cement Bond Log (CBL) shall be run from the production casing shoe to the top of cement. A field copy of the CBL shall be submitted to the BLM Vernal Field Office.

All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to. The following items are emphasized:

DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a test pump with a chart recorder and **NOT** by the rig pumps. Test shall be reported in the driller's log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.

- **Cement baskets shall not be run on surface casing.**
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal Field Office.
- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.
- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- Chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- **Please submit an electronic copy of all other logs run on this well in LAS format to UT_VN_Welllogs@BLM.gov. This submission will supersede the requirement for submittal of paper logs to the BLM.**
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

OPERATING REQUIREMENT REMINDERS:

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.
- In accordance with 43 CFR 3162.4-3, this well shall be reported on the "Monthly Report of Operations" (Oil and Gas Operations Report ((OGOR)) starting with the month in which operations commence and continue each month until the well is physically plugged and abandoned. This report shall be filed in duplicate, directly with the Minerals Management Service, P.O. Box 17110, Denver, Colorado 80217-0110, or call 1-800-525-7922 (303) 231-3650 for reporting information.
- Should the well be successfully completed for production, the BLM Vernal Field office must be notified when it is placed in a producing status. Such notification will be by written communication and must be received in this office by not later than the fifth business day following the date on which the well is placed on production. The notification shall provide, as a minimum, the following informational items:
 - Operator name, address, and telephone number.
 - Well name and number.
 - Well location (¼¼, Sec., Twn, Rng, and P.M.).
 - Date well was placed in a producing status (date of first production for which royalty will be paid).
 - The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
 - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
 - Unit agreement and/or participating area name and number, if applicable.
 - Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.
- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or

data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.
- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office Petroleum Engineers will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports shall be submitted to the BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall be identified as the point of sale or allocation for royalty purposes.
- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with Onshore Oil & Gas Order No. 3.
- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be obtained orally, but such approval does not waive the written report requirement.
- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover equipment shall be removed from a well to be placed in a suspended status without prior approval of the BLM Vernal Field Office. If operations are to be suspended for more than 30 days, prior approval of the BLM Vernal Field Office shall be obtained and notification given before resumption of operations.
- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.
- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or reenter an abandoned well. Use Form 3160-3 (APD) for such proposals.

FORM APPROVED
OMB No. 1004-0135
Expires July 31, 1996

5. Lease Serial No.

UTU-025963

6. If Indian, Allottee or Tribe Name

UTE TRIBE

7. If Unit or CA/Agreement, Name and/or No.

N/A

8. Well Name and No.

WV 15D-23-8-21

9. API Well No.

43-047-39664

10. Field and Pool, or Exploratory Area

NATURAL BUTTES

11. County or Parish, State

UINTAH

SUBMIT IN TRIPLICATE - Other Instructions on reverse side

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator

QUESTAR EXPLORATION & PRODUCTION, CO.

3a. Address

11002 E. 17500 S. VERNAL, UT 84078

3b. Phone No. (include area code)

435-781-4331

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

668' FSL 1994' FEL, SW 1/4 SE 1/4, SECTION 23, T8S, R21E

12. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

☒ Notice of Intent

☐ Subsequent Report

☐ Final Abandonment Notice

TYPE OF ACTION

☐ Acidize

☐ Alter Casing

☐ Casing Repair

☒ Change Plans

☐ Convert to Injection

☐ Deepen

☐ Fracture Treat

☐ New Construction

☐ Plug and Abandon

☐ Plug Back

☐ Production (Start/Resume)

☐ Reclamation

☐ Recomplete

☐ Temporarily Abandon

☐ Water Disposal

☐ Water Shut-Off

☐ Well Integrity

☐ Other _____

13. Describe Proposed or Completed Operations (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomple horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recomple in a new interval, a Form 3160-4 shall be filed once Testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

QUESTAR EXPLORATION AND PRODUCTION COMPANY REQUEST PERMISSION TO CHANGE CASING DESIGN FROM WHAT WAS ORIGINALLY APPROVED. THE MAJOR CHANGES ARE AS FOLLOWS.

ELIMINATE THE 7" LINER AND RUN 7" CASING BACK TO SURFACE

CHANGE THE HOLE SIZE FROM 11" FOR THE 9 5/8" CASING TO 12 1/4" AT 5,150' INSTEAD OF 8,500'

INCREASE THE COLLAPSE STRENGTH OF THE 4 1/2" CASING TO HAVE 16.6 # Q-125 LT&C NEW NEAR TD

ATTACHED IS A REVISED DRILLING PLAN AND WELLBORE DIAGRAM.

**Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY**

FOR TECHNICAL QUESTIONS, PLEASE CONTACT JIM DAVIDSON, CHIEF DRILLING ENGINEER FOR QEP AT (303) 308-3090.

14. I hereby certify that the foregoing is true and correct

Name (Printed/Typed)

Laura Bills

Signature

Laura Bills

Title

Regulatory Affairs

Date

May 21, 2008

THIS SPACE FOR FEDERAL OR STATE USE

Approved by

Title

Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

RECEIVED

(Instructions on reverse)

MAY 23 2008

DRILLING PROGRAM

ONSHORE OIL & GAS ORDER NO. 1

Approval of Operations on Onshore
Federal Oil and Gas Leases

All lease and/or unit operations will be conducted in such a manner that full compliance is made with applicable laws, regulations (43 CFR 3100), Onshore Oil and Gas No. 1, and the approved plan of operations. The operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished the field representative to insure compliance.

1. Formation Tops

The estimated tops of important geologic markers are as follows:

<u>Formation</u>	<u>Depth</u>
Uinta	Surface
Green River	2,469'
Wasatch	5,779'
Mesaverde	8,639'
Sego	11,114'
Castlegate	11,229'
Blackhawk	11,563'
Mancos Shale	12,005'
Mancos B	12,440'
Frontier	15,085'
Dakota Silt	15,957'
Dakota	16,157'
TD	16,525'

2. Anticipated Depths of Oil Gas Water and Other Mineral Bearing Zones

The estimated depths at which the top and bottom of the anticipated water, oil, gas. Or other mineral bearing formations are expected to be encountered are as follows:

<u>Substance</u>	<u>Formation</u>	<u>Depth</u>
Gas	Wasatch	5,779'
Gas	Mesaverde	8,639'
Gas	Blackhawk	11,563'
Gas	Mancos Shale	12,005'
Gas	Mancos B	12,440'
Gas	Dakota	16,157'

All fresh water and prospectively valuable minerals encountered during drilling will be recorded by depth and adequately protected. All oil and gas shows will be tested to determine commercial potential.

DRILLING PROGRAM

All water shows and water-bearing sands will be reported to the BLM in Vernal, Utah. Copies of State of Utah form OGC-8-X are acceptable. If flows are detected, samples will be submitted to the BLM along with any water analyses conducted. Fresh water will be obtained from Wonsits Valley water right # A36125 (which was filed on May 7, 1964,) or Red Wash water right # 49-2153 (which was filed on March 25, 1960). It was determined by the Fish and Wildlife Service that any water right number filed before 1989 is not depleting to the Upper Colorado River System, to supply fresh water for drilling purposes. All water resulting from drilling operations will be disposed of at Red Wash Central Battery Disposal Site; SWSE, Section 27, T7S, R23E or Wonsits Valley Disposal Site; SWNW, Section 12, T8S, R21E.

3. **Operator's Specification for Pressure Control Equipment:**

- A. 13-5/8" 5000 psi double gate, 5,000 psi annular BOP (schematic included) from surface hole to 9-5/8" casing point. A 13-5/8" 10,000 psi double and single gate may be substituted based on contractor availability and substructure height of the drilling rig.
- B. 11" or 13-5/8" 10,000 psi double gate, 10,000 psi single gate, 10,000 psi annular BOP (schematic included) from 9-5/8" casing point to total depth. The choice of BOP stacks is based on the drilling contractor's availability.
- C. Functional test daily
- D. All casing strings shall be pressure tested (0.2 psi/foot or 1500 psi, whichever is greater) prior to drilling the plug after cementing; test pressure shall not exceed the internal yield pressure of the casing.
- E. Ram type preventers and associated equipment shall be tested to approved stack working pressure if isolated by test plug or to 50 percent of internal yield pressure of casing whichever is less. BOP and related equipment shall meet the minimum requirements of Onshore Oil and Gas Order No. 2 for equipment and testing requirements, procedures, etc..., for a 10M system and individual components shall be operable as designed.

DRILLING PROGRAM

4. Casing Design:

Hole Size	Csg. Size	Top (MD)	Bottom (MD)	Mud Weight	Wt. lb/ft	Grade	Thread	Cond.
26"	20"	sfc	40-60'	N/A	Steel	Cond.	None	Used
17-1/2"	13-3/8"	sfc	500'	N/A	54.5	K-55	STC	New
12-1/4"	9-5/8"	sfc	5,150'	9.2	47	HCP-110	Flush Jnt **	New
8-1/2"	7"	Surface	9,000'		26	HCP-110	LTC	New
8-1/2"	7"	9000'	12,100'	13.5	29 SDrift *	HCP-110	LTC	New
6-1/8"	4-1/2"	sfc	13,000'		15.1	P-110	LTC	New
6-1/8"	4-1/2"	13,000'	15,000'		15.1	Q-125	LTC	New
6-1/8"	4-1/2"	15,000'	16,525'	15.1	16.6	Q-125	LTC	New

Casing Strengths:				Collapse	Burst	Tensile (minimum)
13-3/8"	54.5 lb.	K-55	STC	1,130 psi	2,730 psi	547,000 lb.
9-5/8"	47 lb.	HCP-110	LTC	7,100 psi	9,440 psi	1,213,000 lb.
7"	26 lb.	HCP-110	LTC	7,800 psi	9,950 psi	693,000 lb.
7"	29 lb.*	HCP-110	LTC	9,200 psi	11,220 psi	797,000 lb.
4-1/2"	15.1 lb.	P-110	LTC	14,350 psi	14,420 psi	406,000 lb.
4-1/2"	15.1 lb.	Q-125	LTC	15,840 psi	16,380 psi	438,000 lb.
4-1/2"	16.6 lb.	Q-125	LTC	19,010 psi	18,130 psi	493,000 lb.

* **Special Drift**

** **Flush Jnt – VAM SLIJ II or LT&C based on availability**

MINIMUM DESIGN FACTORS:

COLLAPSE: 1.125
 BURST: 1.10
 TENSION: 1.80

DRILLING PROGRAM

Area Fracture Gradient: 0.9 psi/foot
Maximum anticipated mud weight: 15.1 ppg
Maximum surface treating pressure: 12,500 psi

5. Cementing Program

20" Conductor:

Cement to surface with construction cement.

13-3/8" Surface Casing: sfc – 500' (MD)

Slurry: 0' – 500'. 610 sxs (731 cu ft) Premium cement + 0.25 lbs/sk Flocele + 2% CaCl₂
Slurry wt: 15.6 ppg, slurry yield: 1.20 ft³/sx, slurry volume: 17-1/2" hole + 100% excess.

9-5/8" Intermediate Casing: sfc – 5,150' (MD)

Lead Slurry: 0' – 4,650'. 1338 sxs (350 bbls) Foamed Lead 50/50 Poz cement + 0.1 % FDP-C766-05 (Low Fluid Loss Control) + 5 #/sx Silicate Compacted + 20 % SSA-1 + 0.1 % Versaset + 1.5 % Zonesalant 2000 (foamer) Slurry wt: 14.3 ppg, (unfoamed) or 11.0 ppg (foamed). Slurry yield: 1.47 ft³/sk (unfoamed), Slurry volume: 12-1/4" hole + 35% excess.

Tail Slurry: 4,650' – 5,150'. 115 sxs (30 bbls) Tail 50/50 Poz cement + 0.1 % FDP-C766-05 (Low Fluid Loss Control) + 5 #/sx Silicate Compacted + 20 % SSA-1 + 0.1 % Versaset. Slurry wt: 14.3 ppg, Slurry yield: 1.47 ft³/sk, Slurry volume: 12-1/4" hole + 35% excess.

7" Intermediate Casing: sfc - 12,100' (MD)

Foamed Lead Slurry 2: 0' – 11,650'. 1357 sxs (1995 cu ft) 0.1% HALAD-766 (Low Fluid Loss Control); Slurry Yield: 1.47 ft³/sk; 5 lbm/sk Silicalite Compacted (Light Weight Additive) Total Mixing Fluid: 6.40 Gal/sk; 20 % SSA-1 (Heavy Weight Additive); 0.1 % Versaset (Thixotropic Additive); 1.5 % FDP-C760-04 (Foamer) 35% excess.

Tail Slurry: 11,650' – 12,150'. 60 sxs (79.3 cu ft) 0.1% HALAD-766 (Low Fluid Loss Control) Slurry Yield: 1.47 ft³/sk; 5 lbm/sk Silicalite Compacted (Light Weight Additive) Total Mixing Fluid: 6.40 Gal/sk; 20 % SSA-1 (Heavy Weight Additive); 0.1% Versaset (Thixotropic Additive); 1.5% FDP-C760-04 (Foamer).

4-1/2" Production Casing: sfc - 16,525' (MD)

Lead/Tail Slurry: 5,500' - 16,525'. 940 sxs (1401 cu ft) Premium Cement + 17.5% SSA-1, + 4% Microbond HT, + 0.2% Halad 344 + 0.5% Halad 413, + 0.3% CFR-3, + 0.9% HR-12, + 0.2% Super CBL, + 0.2% Suspend HT, 17.5% SSA-2. Slurry wt: 16.2 ppg, Slurry yield: 1.49 ft³/sk, Slurry volume: 6-1/8" hole + 35% in open hole section.

*Final cement volumes to be calculated from caliper log with an attempt to be made to circulate cement to the surface on the intermediate strings and 5,500' on the production string. A bond log will be run across the zone of interest and across zones as required by the authorized officer to insure protection of natural resources.

DRILLING PROGRAM

6. **Auxiliary Equipment**

- A. Kelly Cock – yes
- B. Float at the bit – yes
- C. Monitoring equipment on the mud system – visually and/or PVT/Flow Show
- D. Full opening safety valve on the rig floor – yes
- E. Rotating Head – yes
If drilling with air the following will be used:
- F. Request for Variance

Drilling surface hole with air:

A variance from 43 CFR 3160 Onshore Oil and Gas Order #2, Section III Requirements, subsection E. Special Drilling Operations is requested for the specific operation of drilling and setting surface casing on the subject well with a truck mounted air rig. The variance from the following requirements of Order #2 is requested because surface casing depth for this well is 500 feet and high pressures are not expected.

1. **Properly lubricated and maintained rotating head** – A diverter system in place of a rotating head. The diverter system forces the air and cutting returns to the reserve pit and is used to drill the surface casing.
2. **Blooie line discharge 100 feet from wellbore and securely anchored** – the blooie line discharge for this operation will be located 50 to 70 feet from the wellhead. This reduced length is necessary due to the smaller location size to minimize surface disturbance.
3. **Automatic ignitor or continuous pilot light on blooie line** – a diffuser will be used rather than an automatic pilot/ignitor. Water is injected into the compressed air and eliminates the need for a pilot light and the need for dust suppression equipment.
4. **Compressors located in the opposite direction from the blooie line a minimum of 100 feet from the wellbore** – compressors located within 50 feet on the opposite side of the wellbore from the blooie line and is equipped with a 1) emergency kill switch on the driller's console, 2) pressure relief valves on the compressors, 3) spark arrestors on the motors.

DRILLING PROGRAM

- G. All other operations and equipment for air/gas drilling shall meet specifications in Onshore Order #2, Section III Requirements, subsection E. Special Drilling Operations and Onshore Order #1.

Surface hole will be drilled with air, air/mist, foam, or mud depending on hole conditions. Intermediate holes will be with water based drilling fluids consisting primarily of fresh water, bentonite, lignite, caustic, lime, soda ash and polymers. The production hole will be drilled with oil base mud (OBM). No chromates will be used. Maximum anticipated mud weight is 15.1 ppg.

No minimum quantity of weight material will be required to be kept on location.

PVT/Flow Show will be used from base of surface casing to TD.

Gas detector will be used from surface casing depth to TD.

7. Testing, logging and coring program

- A. Cores – none anticipated
- B. DST – none anticipated
- C. Logging – Mud logging – 4500' to TD
GR-SP-Induction, Neutron Density, FMI
- D. Formation and Completion Interval: Mancos interval, final determination of completion will be made by analysis of logs.
Stimulation – Stimulation will be designed for the particular area of interest as encountered.

8. Anticipated Abnormal Pressures and Temperatures, Other Potential Hazards

No abnormal temperatures or pressures are anticipated. No H₂S has been encountered in or known to exist from previous wells drilled to similar depths in the general area. Maximum anticipated bottom hole pressure equals approximately 12,500 psi. Maximum anticipated bottom hole temperature is 300° F.

DRILLING PROGRAM

9. Additional Information For Oil Base Mud

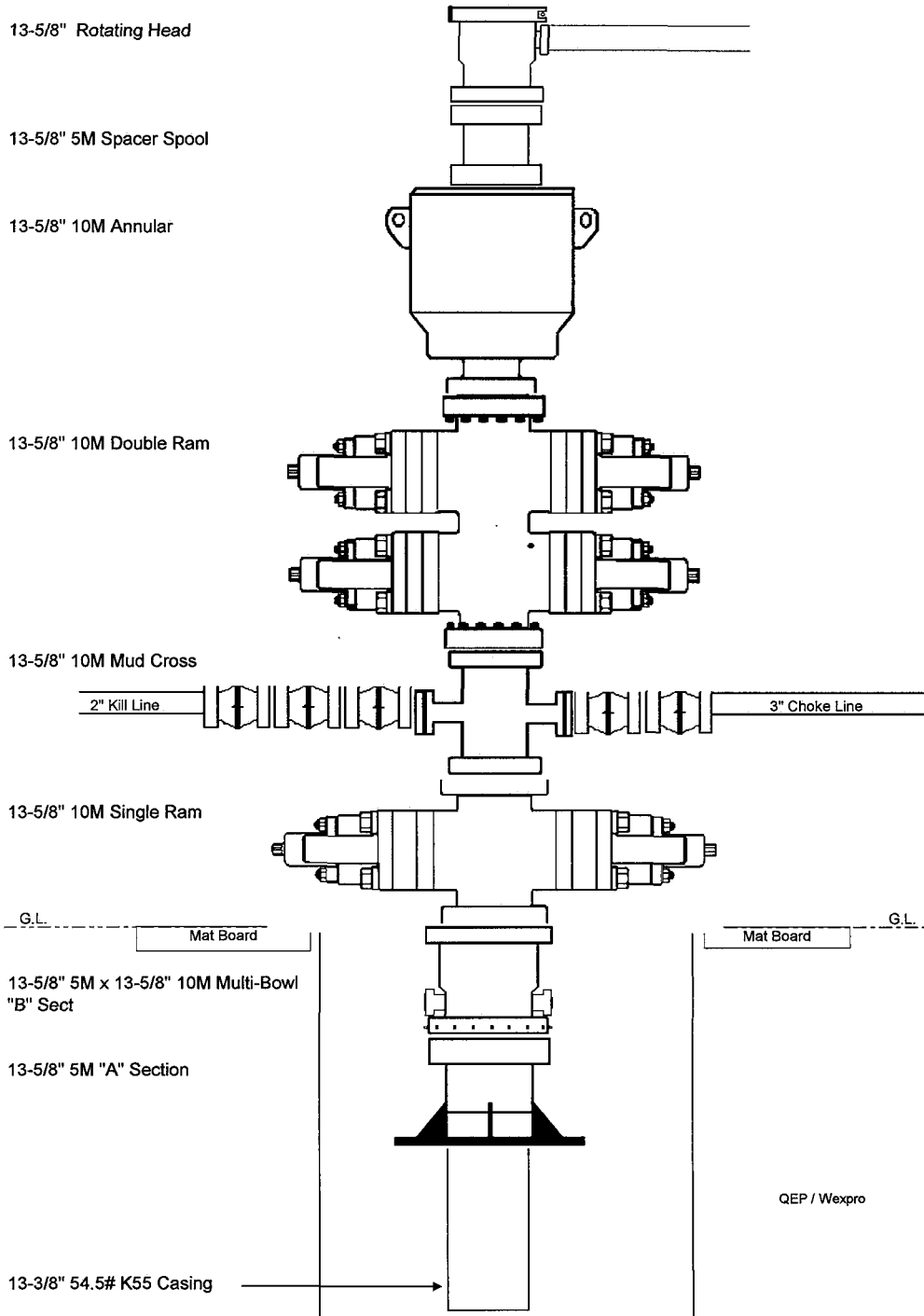
- A. See attached diagram of well pad layout. A reserve pit will be constructed for this location. This pit will be constructed so that a minimum of two vertical feet of freeboard exists above the top of the pit at all times and at least one-half of the holding capacity will be below ground level. The pit will be lined with a synthetic reinforced liner, 30 millimeters thick, with sufficient bedding used to cover any rocks prior to putting any fluids into the pit. The pad will be designed so that runoff from adjacent slopes does not flow into the reserve pit. The liner will overlap the pit walls and be covered with dirt and/or rocks to hold it in place. At the beginning of drilling operations this reserve pit will have an open-ended dike placed in the pit that allows the fluids to migrate from one side of the pit to the other during the drilling of the surface and intermediate hole using water based mud. At the time that operations begin to drill the production hole with oil base mud, this dike will be extended, dividing the pit into two distinct, isolated halves allowing no migration of fluids from one side to the other. At that time all fluids will be removed from the end of the pit to be used as a cuttings pit. This cuttings pit will be used for oil based cuttings generated during drilling of the production hole.
- B. Oil-base mud will be mixed in the closed circulating system and transferred to four 500-bbl tanks on location for storage prior to and after drilling operations. Drip pans will be installed below the rotary beams on the substructure and can be viewed on site from the cellar area. As the production section of the hole is drilled, the cuttings transported to the surface with the drilling fluid will be mechanically separated from the drilling fluid as waste by two shale-shakers and then cleaned/dried via a mud cleaner and/or centrifuge. These separated cuttings will be collected in a steel catch tank once they leave the closed circulating system and transported and placed into the cuttings half of the reserve pit.
- C. Plastic material will underlay the rig, oil base mud/diesel storage tanks and mud pits. All tanks on location will be placed inside of berms. Any oily waste fluids and sediments generated at the work site during drilling operations or when cleaning the fluid containment system after drilling will also be placed into the cuttings half of the pit.
- D. All rig ditches will be lined and directed to a lined sump for fluid recovery. A drip pan will be installed on the BOP stack, a mud bucket will be utilized as needed on connections and a vacuum system will be used on the rig floor for fluid recovery in those areas.
- E. Once all waste has been placed in the cuttings portion of the pit and all necessary approvals obtained, the oilfield waste management consultant Soli-Bond or a similar company will mobilize equipment and personnel to the site to perform the cement

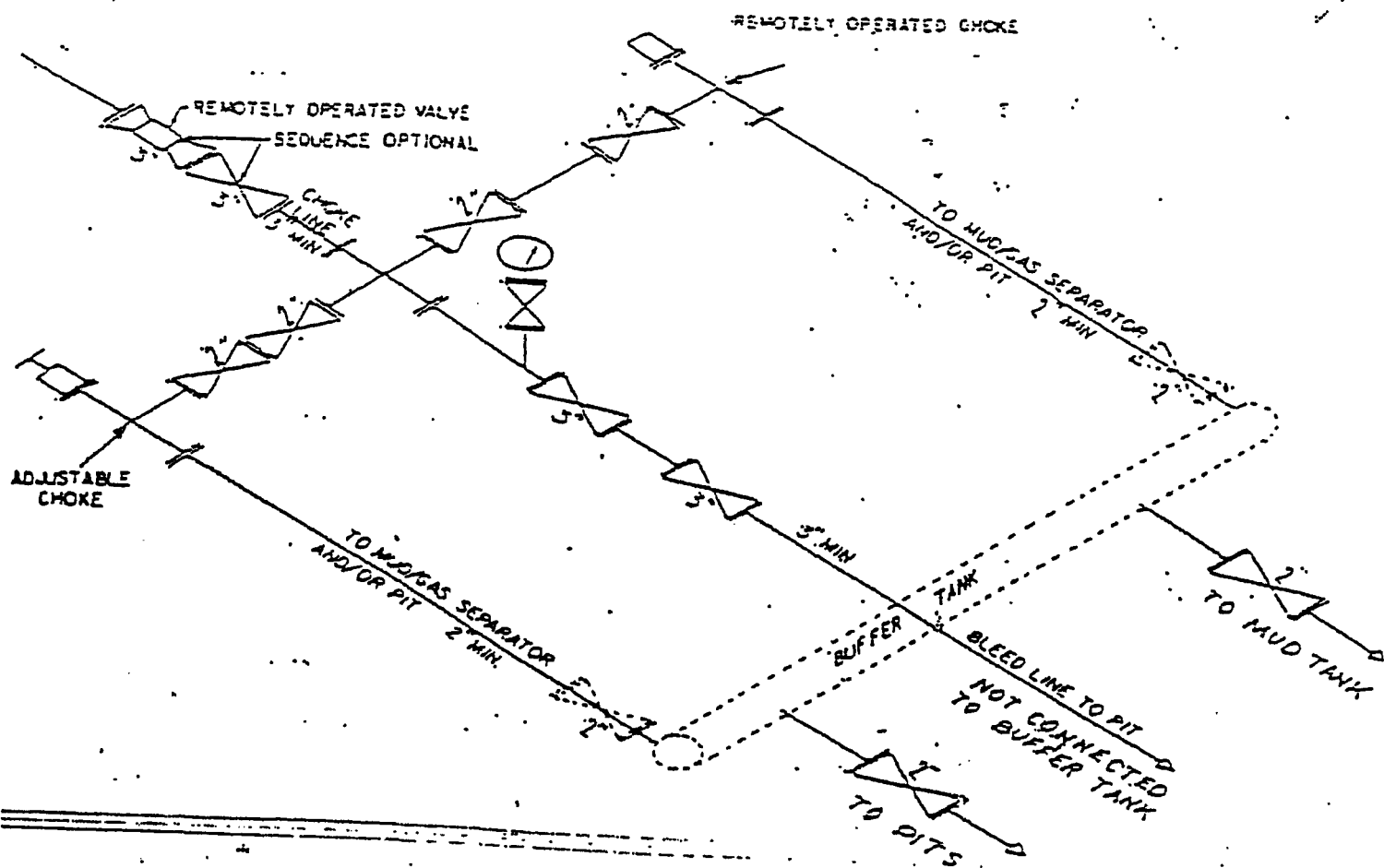
DRILLING PROGRAM

based solidification/stabilization process in-situ for encapsulation. Soil will be backfilled over the processed material used on the cuttings side of the pit and that portion of the pit area will be returned to the existing grade bordering the pit. Please see the attached Soli-Bond Proposal for Processing and Disposal of Drilling Waste for specific details. The half of the reserve pit containing water base materials will be left to evaporate and will be closed and reclaimed at the time that portion of the pit is dry.

DRILLING PROGRAM

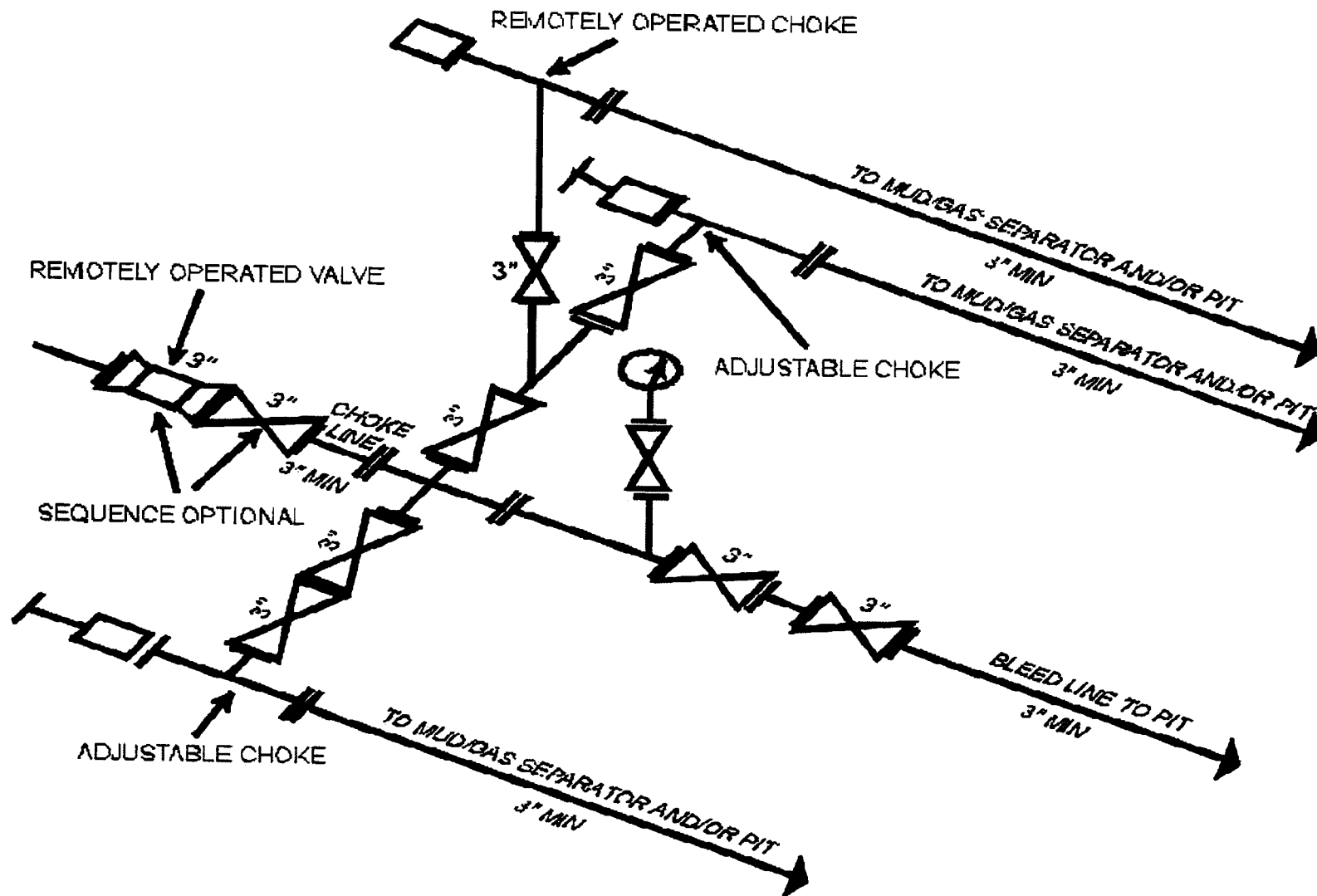
BOP Requirements:





② SM CHOKE MANIFOLD EQUIPMENT — CONFIGURATION OF CHOKES MAY VARY

Attachment I. Diagrams of Choke Manifold Equipment

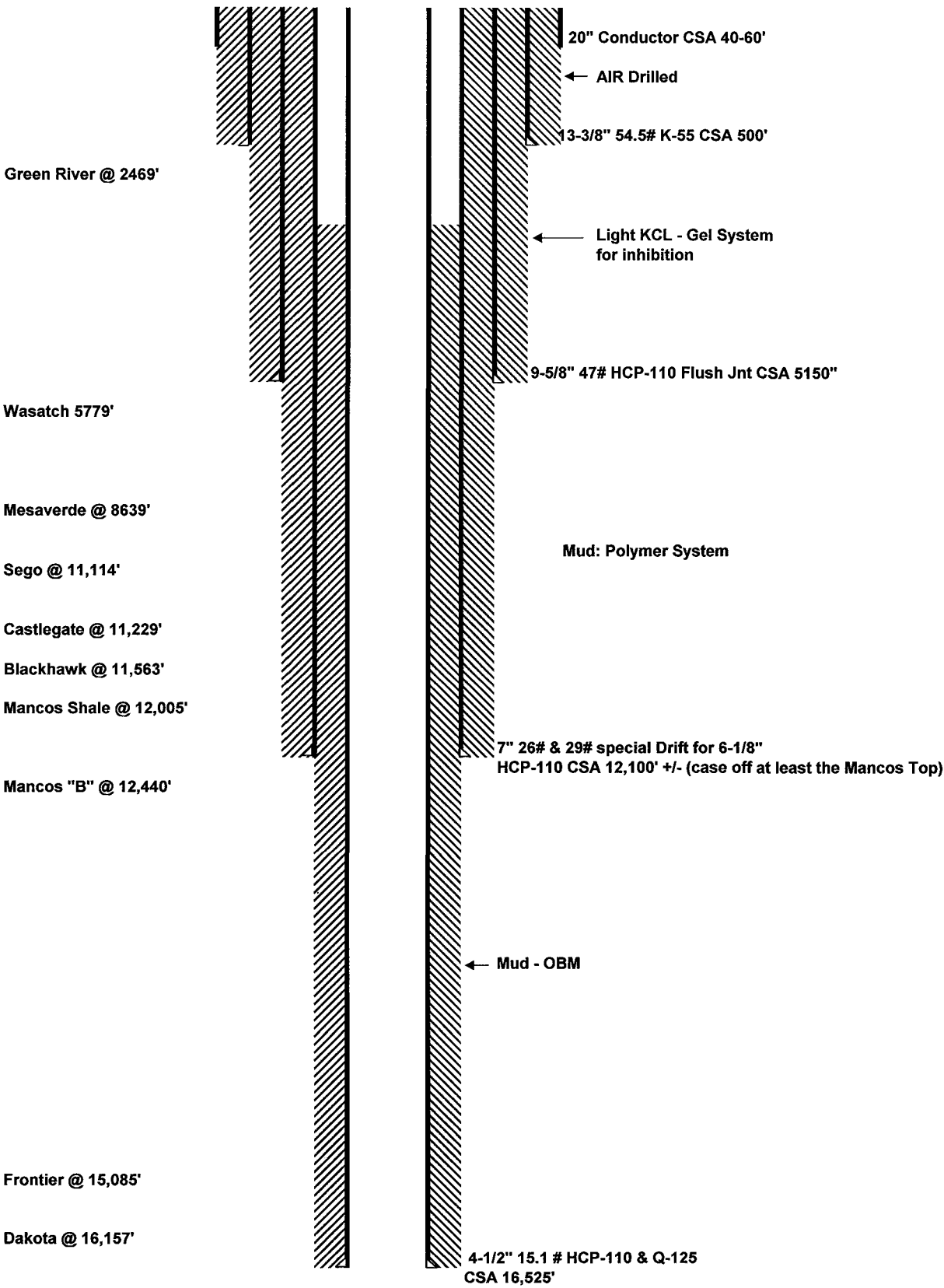


I-4 10M and 15M Choke Manifold Equipment -- Configuration of chokes may vary

[54 FR 39528, Sept. 27, 1989]

Last Updated March 25, 1997 by John Broderick

WV 15D-23-8-21



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DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

Name of Company: QUESTAR EXPLORATION & PRODUCTION CO

Well Name: WV 15D-23-8-21

Api No: 43-047-39664 Lease Type: FEDERAL

Section 23 Township 08S Range 21E County UINTAH

Drilling Contractor PETE MARTIN DRLG RIG # RATHOLE

SPUDDED:

Date 06/06/08

Time 1:00 PM

How DRY

Drilling will Commence: _____

Reported by RICK BUSH

Telephone # (307) 850-2092

Date 06/09//08 Signed CHD

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir
Use "APPLICATION FOR PERMIT--" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well

Oil

Gas

☐

Well

☒

Well

☐

Other

2. Name of Operator

QUESTAR EXPLORATION & PRODUCTION CO.

3. Address and Telephone No.

11002 EAST 17500 SOUTH - VERNAL, UT 84078

Contact: **Dahn.Caldwell@questar.com**

435-781-4342 Fax 435-781-4357

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

668' FSL, 1994' FEL, SWSE, SEC 23-T8S-R21E

5. Lease Designation and Serial No.

UTU-025963

6. If Indian, Allottee or Tribe Name

UTE TRIBE

7. If Unit or CA, Agreement Designation

N/A

8. Well Name and No.

WV 15D 23 8 21

9. API Well No.

43-047-39664

10. Field and Pool, or Exploratory Area

NATURAL BUTTES

11. County or Parish, State

UINTAH

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

☐

Notice of Intent

☒

Subsequent Report

☐

Final Abandonment Notice

TYPE OF ACTION

☐

Abandonment

☐

Recompletion

☐

Plugging Back

☐

Casing Repair

☐

Altering Casing

☒

Other **SPUD**

☐

Change of Plans

☐

New Construction

☐

Non-Routine Fracturing

☐

Water Shut-Off

☐

Conversion to Injection

☐

Dispose Water

(Note) Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work)

On 6/6/08 - Drilled 80' of 26" conductor hole. Set 80' of 20" conductor pipe. Cmted w/ Ready Mix.

3 - BLM, 2- Utah OG&M, 1 - Denver, 1 - file Word file server

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14. I hereby certify that the foregoing is true and correct.

Signed

Dahn F. Caldwell

Office Administrator II

Date

6/9/08

(This space for Federal or State office use)

Approved by:

Title

Conditions of approval, if any

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

ENTITY ACTION FORM - FORM 6

OPERATOR: Questar Exploration & Production Co.
ADDRESS: 11002 East 17500 South
Vernal, Utah 84078 (435)781-4342

OPERATOR ACCT. No. N-5085

Action Code	Current Entity No.	New Entity No.	API Number	Well Name	QQ	SC	TP	RG	County	Spud Date	Effective Date
A	99999	16924	43-047-39664	WV 15D 23 8 21	SWSE	23	8S	21	Uintah	6/6/08	6/19/08
WELL 1 COMMENTS: DKTA											
WELL 2 COMMENTS:											
WELL 3 COMMENTS:											
WELL 4 COMMENTS:											
WELL 5 COMMENTS:											

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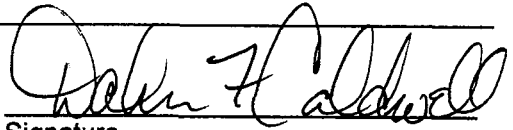
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ACTION CODES (See instructions on back of form)

- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (explain in comments section)

NOTE: Use COMMENT section to explain why each Action Code was selected

(3/89)


Signature

Office Administrator II 6/9/08
Title Date

Phone No. (435)781-4342

CONFIDENTIAL

CONFIDENTIAL

43-047-396A
23 88 21e

QUESTAR

Page 1 of 16

Operations Summary Report

Legal Well Name: WV 15D-23-8-21
Common Well Name: WV 15D-23-8-21
Event Name: DRILLING
Contractor Name: Unit Drilling Co.
Rig Name: UNIT

Start: 6/9/2008
Rig Release:
Rig Number: 109
Spud Date: 6/9/2008
End:
Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
6/10/2008	06:00 - 10:00	4.00	LOC	2	DRLCON	RIG UP BUCKET RIG-DRILL 26" HOLE 90' DEEP-SET 20" PIPE AND CEMENT SAME- ACTUAL SPUD ON 6/9/08 AT 0700 HRS.
	10:00 - 01:00	15.00	DRL	9	DRLSUR	MOVE IN & RIG UP AIR RIG- DRILL 17 1/2" HOLE F/ 90' TO 570' (32' OF RAT HOLE)- BLOW DOWN HOLE- LAY DOWN PIPE
	01:00 - 03:00	2.00	CSG	2	CSGSUR	RUN 12 JOINTS OF 13 3/8", K-55, 54.5#, STC CASING-LAND CASING @ 538 FEET
	03:00 - 06:00	3.00	CMT	2	CSGSUR	CEMENT 13 3/8" CASING AS PER PROGRAM: PUMP 60 BBLS. CLEAR WATER & 20 BBLS GEL WATER-MIX & PUMP 102.4 BBLS. 15.8PPG LEAD SLURRY-DISPLACE W/ 75.9 BBLS. CLEAR WATER-BUMP PLUG W. 900 PSI-CHECK FLOATS (OK)-FULL RETURNS DURING JOB/ 35 BBLS. CEMENT TO SURFACE
7/6/2008	06:00 - 18:00	12.00	LOC	4	RDMO	RIG DOWN WITH CRANE, SOLIDS CONTROL, HOPPER, BAR HOPPERS, GAS BUSTER AND 50% FLARE LINES, HAUL ALL 5" DP AND BHA, LOWER DERRICK, ELECTRICAL LINES 50% DONE, TRANSFER 800 BBLS OIL BASE TO UP RIGHT
	18:00 - 06:00	12.00	LOC	4	RDMO	RIG DOWN - LD DERRICK - PULL DRAWWRKS LEADS - LD LIGHTS, WATER LINES, AIR, CLEAN IN SUB
7/7/2008	06:00 - 18:00	12.00	LOC	4	RDMO	SET DERRICK ON GROUND, LAY RIG LINER OUT ON NEW LOCATION, 80% OF BACKEND MOVED OUT, DRAWWORKS DOWN, RT. TABLE ON WAY TO CASPER FOR REPAIRS, HYDRILL ON WAY TO CASPER FOR REPAIRS, UNSTRING DERRICK, STARTED HARDBANDING TONITE - STEAMERS TO SHOW UP IN MORNINING FOR DERRICK - TRUCK PUSHER TO BE HERE ON MONDAY MORNING
	18:00 - 06:00	12.00	LOC	4	RDMO	WAIT ON DAYLIGHTS
7/8/2008	06:00 - 18:00	12.00	LOC	3	RDMO	STEAM DERRICK OFF, HARDBAND BHA,FINISH RIG SUBS DOWN, SET SUBS, WELD ON WELLHEAD, SET MUDTANKS AND CHOKE HOUSE, SET IN 60% OF BACKEND IN, INSTALL NIGHT CAP, PREPARE OIL BASE FARM FOR MOVE, AT 1800 HYDRILL WAS BEING TESTED AND WILL BE ON LOCATION TUESDAY MORNING AT 0700, NO WORD ON RT. YET,
	18:00 - 06:00	12.00	LOC	3	RDMO	WAIT ON DAYLIGHTS
7/9/2008	06:00 - 18:00	12.00	LOC	3	RDMO	DIG UP BURIED FLARE LINES, INSTALL BOP,FINISH SETTING IN BACK END, SET BUSTER AND LINES TO CHOKE, SET DRAWWORKS, SOLIDS CONTROL,BOTH DOG HOUSES AND WIND WALLS, FLOOR PLATES, GRASSHOPPER SET,SUIT CASE SET,OILBASE FARM ISOLATION AREA READY FOR TANKS, DERRICK IN MORNING WITH OILBASE FARM, WELDERS CHANGEING OUT ALL TOP DRIVE TRACK TURN BUCKLE EARS AS THE TWO TOP ONES ARE TORN AND CRACKED-THEY WERE ONLY MADE FROM 3/8 AND THEY ARE NOW 1" - NEW FLARE LINE HOLDERS 60% DONE AND WE FILLED THEM WITH CEMENT TODAY
	18:00 - 06:00	12.00	LOC	3	RDMO	WAIT ON DAYLIGHTS
7/10/2008	06:00 - 18:00	12.00	LOC	3	RDMO	FINISHED SETTING BACKEND IN, FINISHEDSETTING UP MUD FARM, WELDERS FINISHED WORK IN DERRICK AND XRAYED WELDS, FINISHED SETTING IN SOLIDS CONTROL, PUT DERRICK TOGETHER AND SET ON FLOOR, MOVED SHACKS AND SET IN, START MOVING IN 4"PIPE, SET HOPPER IN
	18:00 - 06:00	12.00	LOC	3	RDMO	WAIT ON DAYLIGHTS
7/11/2008	06:00 - 18:00	12.00	LOC	3	RDMO	FINISH MOVING RIG IN AND SETUP, RELEASE TRUCKS AND CRANE, STRING UP, WORK ON NEW FLARE LINE STANDS, FINISH SOLIDS CONTROL, CHANGE OUT KELLY HOSE, START CHANGING
	18:00 - 06:00	12.00	LOC	3	RDMO	

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Printed: 9/3/2008 2:01:51 PM

DIV. OF OIL, GAS & MINING

Operations Summary Report

Legal Well Name: WV 15D-23-8-21

Common Well Name: WV 15D-23-8-21

Event Name: DRILLING

Contractor Name: Unit Drilling Co.

Rig Name: UNIT

Start: 6/9/2008

Rig Release:

Rig Number: 109

Spud Date: 6/9/2008

End:

Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
7/11/2008	06:00 - 18:00	12.00	LOC	3	RDMO	OUT TOP DRIVE HOSES, START RIG UP, CHANGING VALVES IN MUD TANKS, HAUL 4" DP , HAUL OILBASE TO TANKS - OLD LOCATION 100% CLEARED OFF, CHANGED FLOW LINE LOCATION
	18:00 - 06:00	12.00	LOC	4	RDMO	WAIT ON DAYLIGHTS
7/12/2008	06:00 - 18:00	12.00	LOC	4	MIRU	FINISH CHANGING OUT TOP DRIVE HOSES, RAISE DERRICK, BRIDAL DOWN, CHANGE OIL ON SWIVEL AND INSTALL, RIG UP FLOOR AND GEL GATES, FINISH REPAIRS ON GUN LINE VALVES AND AGITATOR, HANG SERVICE LOOP, WILL BREAK TOUR ON SATURDAY, FINISHED FLARE LINES, PREPARE OILBASE FARM FOR CIRCULATING, PUT YELLOW DOG ONLINE TO CIRCULATE PIT WITH LIME, WILL FILL MUD AND DAYTANKS IN MORNING.
7/13/2008	06:00 - 18:00	12.00	LOC	4	MIRU	FINISH PUTTING TORQUE TUBE TOGETHER AND HANG, RIG UP HIGH PRESSURE DRESSER SLEEVE ON FLOWLINE, START RIGGING UP TOP DRIVE, FIX LEAKS ON PITS AND CHANGE OUT ONE MORE VALVE, FILL PITS AND DAY TANK, START ON STAND PIPE
	18:00 - 06:00	12.00	LOC	4	MIRU	RIG UP KELLY TO TOP DRIVE AND TORQUE UP ALL JOINTS, MAKE UP REFABRICATED STAND PIPE, CENTER STACK AND HAVE WELDER REFAB FLOW LINE, CHANGE OIL IN TOP DRIVE, PREPARE FOR TESTING BOP'S, WORK ON PUMPS
7/14/2008	06:00 - 08:00	2.00	BOP	1	MIRU	FINISH NIPPLE UP FINLLY, TORQUED UP ALL NUTS
	08:00 - 13:00	5.00	BOP	2	MIRU	TEST BOP'S - 5000 PSI TEST
	13:00 - 18:00	5.00	LOC	4	MIRU	RIG UP BOARD, RIG FLOOR WITH SUBS ECT., INSTALL WEAR BUSHING, PUMP THREW PUMPS AND FLOW LINE, FIX LEAKS, PRESSURE TEST MUD LINES, GET WELDER FOR KELLY HOSE, WAITING FOR PARTS FROM CASPER FOR #2 MOTOR, BLEW INJECTOR THREW VALVE COVER, DAYLIGHTS CREW IS JUST KILLING ME, STAYED QUIT UNTIL 1300 AND BLEW UP, HAVE NOT PUT THEM ON DAYWORK YET, TOO MUCH TODO WITH THIS CREW, ME AND MUD ENGINEER WILL ALSO RACK AND TALLY BHA FOR THEM - FINISHED MUD DOCK LANDING, SHOULD WORK WELL WITH VERY SHORT BACKEND AND TANK FARM SET IN, TAKE KELLY HOSE DOWN, WAIT ON WELDER TO REPAIR LEAK, PUT REPAIRED CATWALK EXTENTION ON, WHILE WAITING ON WELDER THEY ARE CHANGING OIL IN #3 MOTOR SO WE WE CANT PICK UP BHA WITH ONE MOTOR, KELLY COOLED OFF SO WE REINSTALLED, RE-PRESSURE TEST SURFACE LINES, STILL LEAKING, REPAIR BYPASS VALVE ON #1 PUMP, REPAIR BOTH POP-OFF VALVES, REPLACE DISCHARGE SEAT IN #1 PUMP, PARTS SHOWED UP AT 0200 THIS AM FOR #2 MOTOR, MOTOR REPAIRED BY MECHANIC
	18:00 - 03:30	9.50	LOC	4	MIRU	CUT 156' OF BRAND NEW DRILL LINE FROM DRUM, TO MUCH ON DRUM AND STARTED CROSS WRAPPING WHEN RUNNING BLOCKS UP,
	03:30 - 04:30	1.00	RIG	6	MIRU	RIG IS NOW IN PROPER WORKING ORDER AND WILL PUT ON PAY-ROLL AT 0600 THIS MORNING AND WILL GIVE 8 HOURS BACK TO UNIT ON RIG DOWN, START PICKING UP BHA - MUD TANKS HAVE 1400 BBLs AND ALL MUD PRODUCTS ADDED - READY TO ROCK IN ROLL ?
	04:30 - 06:00	1.50	TRP	1	MIRU	PICK UP BHA
7/15/2008	06:00 - 10:00	4.00	TRP	1	DRLIN1	INSTALL RT. HEAD
	10:00 - 10:30	0.50	BOP	1	DRLIN1	RE WRAP DRILL LINE ON DRUM
	10:30 - 11:00	0.50	RIG	2	DRLIN1	CIRCULATE AND CHECK BOTH CHOKES AND BUSTER LINES FOR
	11:00 - 12:00	1.00	EQT	1	DRLIN1	

Operations Summary Report

Legal Well Name: WV 15D-23-8-21

Common Well Name: WV 15D-23-8-21

Event Name: DRILLING

Contractor Name: Unit Drilling Co.

Rig Name: UNIT

Start: 6/9/2008

Rig Release:

Rig Number: 109

Spud Date: 6/9/2008

End:

Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
7/15/2008	11:00 - 12:00	1.00	EQT	1	DRLIN1	LEAKS, TEST CASING TO 1500 PSI - OK
	12:00 - 15:30	3.50	DRL	4	DRLIN1	DRILL SHOE TRACK - PLUG, FLOAT COLLAR AND SHOE IN CORRECT SPOT
	15:30 - 16:00	0.50	EQT	2	DRLIN1	FIT = 10.3 - 63# SURFACE W/ 8.4
	16:00 - 16:30	0.50	DRL	1	DRLIN1	DRILL TO KELLY DOWN
	16:30 - 17:00	0.50	CIRC	1	DRLIN1	PUMP TWO SWEEPS FOR TRIP OUT
	17:00 - 18:00	1.00	TRP	2	DRLIN1	TRIP OUT WET TO CHANGE OUT TO HOLE OPENER AND MM
	18:00 - 19:00	1.00	TRP	1	DRLIN1	LD BIT AND FLOAT SUB, PICK UP MM AND HOLEOPENER AND IBS - TORQUE ALL
	19:00 - 19:30	0.50	CIRC	1	DRLIN1	SURFACE TEST MM
	19:30 - 21:30	2.00	TRP	2	DRLIN1	TRIP IN TO HOLE
	21:30 - 06:00	8.50	DRL	1	DRLIN1	DRILL FROM 570 TO 1000'
7/16/2008	06:00 - 16:00	10.00	DRL	1	DRLIN1	DRILL FROM 1000' TO 1410
	16:00 - 16:30	0.50	SUR	1	DRLIN1	SURVEY - DEPTH = 1296 - .3 - 303.8
	16:30 - 17:30	1.00	RIG	1	DRLIN1	SERVICE RIG AND TOP DRIVE
	17:30 - 18:00	0.50	DRL	1	DRLIN1	DRILL FROM 1410 TO 1440
	18:00 - 00:00	6.00	DRL	1	DRLIN1	DRILL FROM 1440 TO 1690
	00:00 - 01:00	1.00	DRL	1	DRLIN1	CONNECTIONS AND SLOW PUMP RATES FOR BOTH CREWS
	01:00 - 06:00	5.00	DRL	1	DRLIN1	DRILL FROM 1690 TO 1975 - NO LOSSES THAT WE CAN TELL - TORQUE GETTING BETTER
	06:00 - 06:30	0.50	RIG	2	DRLIN1	PUMP REPAIR- REPLACE BAD SWAB IN #2 PUMP
	06:30 - 13:30	7.00	DRL	1	DRLIN1	DRILL F/ 1975'-2244', WOB- 10-12K, RPM- 155 COMBINED, GPM- 770, MW- 8.6, VIS- 29, PUMPING 10 BBL HI VIS SWEEPS EVERY 100'
	13:30 - 14:30	1.00	RIG	1	DRLIN1	LUBRICATE RIG & TOP DRIVE, FUNCTION TOP PIPE RAMS & COM
7/17/2008	14:30 - 15:00	0.50	SUR	1	DRLIN1	CIRC & SURVEY, SURVEY DEPTH- 2164, .4 INC, 57.9 AZ
	15:00 - 16:30	1.50	DRL	1	DRLIN1	DRILL F/ 2244'-2308', DRLG WITH SAME PARAMETERS, MW & VIS
	16:30 - 17:30	1.00	RIG	2	DRLIN1	PUMPS AIRED UP DUE TO FOAMED UP MUD, WORK FOAM OUT OF MUD WITH DEFOAMER & REPRIME PUMPS
	17:30 - 19:00	1.50	DRL	1	DRLIN1	DRILL F/ 2308'-2355', DRLG WITH SAME PARAMETERS, MW- 8.6, VIS- 30
	19:00 - 19:30	0.50	RIG	2	DRLIN1	PUMP REPAIR- CHANGE BAD SWAB IN #2 PUMP & REPAIR ROD OILER LINE
	19:30 - 20:30	1.00	DRL	1	DRLIN1	DRILL F/ 2355'-2372', WOB- 12-14K, RPM- 155 COMBINED, GPM- 771, MW- 8.6, VIS- 30
	20:30 - 21:00	0.50	RIG	2	DRLIN1	PUMP REPAIR- CHANGE BAD SWAB IN #1 PUMP & UNPLUG ROD OILER LINE
	21:00 - 05:00	8.00	DRL	1	DRLIN1	DRILL F/ 2372'-2527', WOB- 12-15K, RPM- 155 COMBINED, GPM- 771, MW- 8.6, VIS- 29, PUMPING 10 BBL HI VIS SWEEPS AS NEEDED
	05:00 - 06:00	1.00	CIRC	1	DRLIN1	MIX TRIP SLUG
	06:00 - 06:30	0.50	SUR	1	DRLIN1	DROP SURVEY & PUMP TRIP SLUG
7/18/2008	06:30 - 07:00	0.50	TRP	10	DRLIN1	TRIP OUT TO BHA
	07:00 - 07:30	0.50	TRP	10	DRLIN1	PULL ROT. HEAD ELEMENT
	07:30 - 09:30	2.00	TRP	10	DRLIN1	TRIP OUT BHA, HOLE FILL 24 BBLs OVER CALCULATED, FUNCTIONED BLIND RAMS
	09:30 - 11:00	1.50	TRP	1	DRLIN1	CHANGE OUT BIT, HOLE OPENER & MUD MOTOR
	11:00 - 12:00	1.00	RIG	1	DRLIN1	LUBRICATE RIG & TOP DRIVE, REPLACED 2 BAD VALVES IN SUCTION TANK
	12:00 - 12:30	0.50	TRP	1	DRLIN1	SURFACE TEST MUD MOTOR
	12:30 - 13:30	1.00	TRP	10	DRLIN1	TRIP IN & INSTALL ROT. HEAD ELEMENT
	13:30 - 14:00	0.50	REAM	1	DRLIN1	WASH 65' TO BOTTOM, NO FILL
	14:00 - 02:00	12.00	DRL	1	DRLIN1	DRILL F/ 2527'-2698', WOB- 16-22K, RPM- 170 COMBINED, GPM-

Operations Summary Report

Legal Well Name: WV 15D-23-8-21

Common Well Name: WV 15D-23-8-21

Event Name: DRILLING

Contractor Name: Unit Drilling Co.

Rig Name: UNIT

Start: 6/9/2008

Rig Release:

Rig Number: 109

Spud Date: 6/9/2008

End:

Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
7/18/2008	14:00 - 02:00	12.00	DRL	1	DRLIN1	771, MW- 8.7, VIS- 29, PUMPING 10 BBL HI VIS SWEEPS AS NEEDED
	02:00 - 03:00	1.00	RIG	2	DRLIN1	PUMP REPAIR- CHANGE SWAB & REPAIR ROD OILER LINE IN #1PUMP
	03:00 - 06:00	3.00	DRL	1	DRLIN1	DRILL F/ 2698'-2745', WOB- 18-2K, RPM- 170 COMBINED, GPM- 771, MW- 8.7, VIS 28, PUMPING 10 BBL HI VIS SWEEPS AS NEEDED.
7/19/2008	06:00 - 11:30	5.50	DRL	1	DRLIN1	DRILL F/ 2745'-2850', WOB- 18-22K, RPM- 150 COMBINED, GPM- 771, MW- 8.7, VIS- 28, PUMPING HI VIS SWEEPS AS NEEDED, NO TRONA WATER FLOWS
	11:30 - 12:30	1.00	RIG	2	DRLIN1	TOP DRIVE MOTOR OVER HEATED, PULL GAURDS & PRESSURE WASH RADIATOR
	12:30 - 13:30	1.00	RIG	1	DRLIN1	LUBRICATE RIG & TOP DRIVE, FUNCTION LOWER PIPE RAMS & COM
	13:30 - 19:00	5.50	DRL	1	DRLIN1	DRILL F/ 2850'-2962', WOB- 20-23K, RPM- 150 COMBINED, GPM- 771, PUMPING HI VIS SWEEPS AS NEEDED
	19:00 - 19:30	0.50	SUR	1	DRLIN1	DROP SURVEY & PUMP TRIP SLUG
	19:30 - 20:00	0.50	TRP	10	DRLIN1	TRIP OUT F/ BIT & HOLE OPENER
	20:00 - 20:30	0.50	TRP	10	DRLIN1	PULL ROT. HEAD ELEMENT
	20:30 - 22:00	1.50	TRP	10	DRLIN1	TRIP OUT BHA, HOLE FILL 17 BBLS OVER CALCULATED
	22:00 - 23:30	1.50	TRP	1	DRLIN1	BREAK BIT & LAY DOWN MUD MOTOR, PONY DC, IBS & HOLE OPENER, FUNCTION BLIND RAMS
	23:30 - 00:30	1.00	TRP	1	DRLIN1	PICK UP & SURFACE TEST NEW MUD MOTOR
	00:30 - 02:00	1.50	TRP	10	DRLIN1	TRIP IN, FILL PIPE & BREAK CIRC. AFTER BHA
	02:00 - 02:30	0.50	TRP	10	DRLIN1	INSTALL ROT. HEAD ELEMENT
	02:30 - 03:30	1.00	TRP	10	DRLIN1	TRIP IN
	03:30 - 04:00	0.50	REAM	1	DRLIN1	REAM OUT 30' OF 8 3/4" HOLE
	04:00 - 06:00	2.00	DRL	1	DRLIN1	DRILL F/ 2962'-3005', WOB- 8/12K, RPM- 160 COMBINED, GPM- 728, MW- 8.8, VIS- 28, BG GAS- 98u, TRIP GAS- 480u W/ 4' FLARE
7/20/2008	06:00 - 12:30	6.50	DRL	1	DRLIN1	DRILL F/ 3005'-3282', WOB- 14-16K, RPM- 160 COMBINED, GPM- 728, MW- 8.8, VIS- 28, PUMPING 10 BBL HI VIS SWEEPS AS NEEDED, NO TRONA WATER FLOWS.
	12:30 - 13:30	1.00	RIG	1	DRLIN1	LUBRICATE RIG & TOP DRIVE, FUNCTION SUPER CHOKE & COM
	13:30 - 06:00	16.50	DRL	1	DRLIN1	DRILL F/ 3282'-3805, WOB- 16K, RPM- 160 COMBINED, GPM- 728, MW- 8.7, VIS- 28, BG GAS- 1750u, CONN GAS- 3800u W/ 4' FLARE, PUMPING 10 BBL HI VIS SWEEPS AS NEEDED, PICKED UP 1/2" WATER FLOW @ 3650, FLOWING 15 BBLS/HR
7/21/2008	06:00 - 12:00	6.00	DRL	1	DRLIN1	DRILL F/ 3805'-3962', WOB- 16-18K, RPM- 160 COMBINED, GPM- 728, MW- 8.8, VIS- 29, BG GAS- 1950u, CONN GAS- 4500u, NO FLARE, WELL FLOWING FRESH WATER @ 25 BBLS/HR, PUMPING HI VIS SWEEPS AS NEEDED.
	12:00 - 13:00	1.00	RIG	1	DRLIN1	LUBRICATE RIG & TOP DRIVE, FUNCTION TOP PIPE RAMS & COM, CHECK FLOW- FLOWING 28 BBLS/HR
	13:00 - 06:00	17.00	DRL	1	DRLIN1	DRILL F/ 3962'-4374', WOB- 16-18K, RPM- 160 COMBINED, GPM- 728, MW- 8.7, VIS- 28, BG GAS- 2900u, CONN GAS- 5570u, PUMPING HI VIS & BIT BALLING SWEEPS AS NEEDED, FRESH H2O FLOW- 20-30 BBLS/HR
7/22/2008	06:00 - 07:00	1.00	DRL	1	DRLIN1	DRILL F/ 4374'-4395', WOB- 16-18K, RPM- 160 COMBINED, GPM- 728, MW- 8.7, VIS- 29, BG GAS- 2300u, WELL FLOWING 20 BBLS/HR
	07:00 - 08:00	1.00	RIG	2	DRLIN1	REPLACE LINER GASKET IN #2 PUMP
	08:00 - 14:30	6.50	DRL	1	DRLIN1	DRILL F/ 4395'-4581', DRLG WITH SAME PARAMETERS, MW & VIS, WELL FLOWING 17 BBLS/HR
	14:30 - 15:30	1.00	RIG	1	DRLIN1	LUBRICATE RIG & TOP DRIVE, FUNCTION ANNULAR & COM
	15:30 - 06:00	14.50	DRL	1	DRLIN1	DRILL F/ 4581'- 4910', WOB- 16-18K, RPM- 160 COMBINED, GPM-

Operations Summary Report

Legal Well Name: WV 15D-23-8-21
 Common Well Name: WV 15D-23-8-21
 Event Name: DRILLING
 Contractor Name: Unit Drilling Co.
 Rig Name: UNIT

Start: 6/9/2008
 Rig Release:
 Rig Number: 109
 Spud Date: 6/9/2008
 End:
 Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
7/22/2008	15:30 - 06:00	14.50	DRL	1	DRLIN1	728, MW- 8.9, VIS- 32, BG GAS- 1260u, CONN GAS- 506Ou, LIGHT MUD UP @ 4600' STOPPED WATER FLOW
7/23/2008	06:00 - 07:30	1.50	DRL	1	DRLIN1	DRILL F/ 4915'-4946', WOB- 16-20K, RPM- 160 COMBINED, GPM- 728, MW- 9, VIS- 32, BG GAS- 950u, NO FLOW WHILE DRLG & NO LOSSES
	07:30 - 08:00	0.50	SUR	1	DRLIN1	DROP SURVEY & PUMP TRIP SLUG, FLOW CHECK- FLOWING 5 BBLS/HR
	08:00 - 09:30	1.50	TRP	10	DRLIN1	TRIP OUT TO BHA
	09:30 - 10:00	0.50	TRP	10	DRLIN1	PULL ROT. HEAD ELEMENT
	10:00 - 12:00	2.00	TRP	10	DRLIN1	TRIP OUT BHA (WET), HOLE FILL 8 BBLS UNDER CALCULATED
	12:00 - 13:00	1.00	TRP	1	DRLIN1	BREAK BIT & RETRIEVE SURVEY TOOL & LAY DOWN MUD MOTOR, FUNCTIONED BLIND RAMS
	13:00 - 14:00	1.00	RIG	1	DRLIN1	LUBRICATE RIG & TOP DRIVE, CLEAN FLOOR
	14:00 - 15:00	1.00	TRP	1	DRLIN1	PICK UP & SURFACE TEST MUD MOTOR
	15:00 - 16:30	1.50	TRP	10	DRLIN1	TRIP IN, FILL PIPE & BREAK CIRC. EVERY 2000'
	16:30 - 17:00	0.50	TRP	10	DRLIN1	INSTALL ROT. HEAD ELEMENT
	17:00 - 17:30	0.50	TRP	10	DRLIN1	FINISH TRIPPING IN
	17:30 - 18:00	0.50	REAM	1	DRLIN1	WASH 85' TO BOTTOM WITH 3' OF FILL
	18:00 - 00:30	6.50	DRL	1	DRLIN1	DRILL F/ 4946'-5175', WOB- 14-18K, RPM 125 COMBINED, GPM- 728, MW- 8.9, VIS- 32, BG GAS- 400u, CONN GAS- 1350u, TRIP GAS- 6470 W/ 5' FLARE, FRESH WATER FLOW- 5 BBLS/HR
	00:30 - 01:30	1.00	CIRC	5	DRLIN1	CIRC. BOTTOMS UP SAMPLE (100% SHALE W/ TRACE OF LIMESTONE)
	01:30 - 02:30	1.00	TRP	14	DRLIN1	SHORT TRIP 10 STDS
	02:30 - 05:30	3.00	CIRC	1	DRLIN1	CIRC. & CONDITION MUD F/ RUNNING CSG
	05:30 - 06:00	0.50	CIRC	1	DRLIN1	FLOW CHECK & PUMP TRIP SLUG, FLOWING 5 BBLS/HR
7/24/2008	06:00 - 09:00	3.00	TRP	2	DRLIN1	TRIP OUT TO RUN 9 5/8" CSG
	09:00 - 10:30	1.50	TRP	1	DRLIN1	LAY DOWN 8" BHA
	10:30 - 11:30	1.00	TRP	2	DRLIN1	PULL WEAR BUSHING
	11:30 - 14:00	2.50	CSG	1	DRLIN1	HOLD SAFETY MEETING & RIG UP ROCKY MTN CSG. CREW
	14:00 - 21:30	7.50	CSG	2	DRLIN1	MAKE UP FLOAT EQUIPMENT & RUN 9 5/8" CSG, FILL PIPE & BREAK CIRC. EVERY 1200', LOST 62 BBLS RUNNING CSG.
	21:30 - 22:00	0.50	REAM	1	DRLIN1	WASH DOWN LAST 35' & LAND CSG
	22:00 - 01:30	3.50	CIRC	1	DRLIN1	CIRC. & CONDITION MUD, RIG DOWN CSG CREW & LAY DOWN MACHINE, GPM- 430
	01:30 - 05:00	3.50	CSG	2	DRLIN1	LAY DOWN LANDING JT., INSTALL PACK OFF ASSEMBLY & CEMENT ISOLATION TOOL, TEST PACKOFF TO 8000 PSI & VOID TO 5000 PSI
7/25/2008	05:00 - 06:00	1.00	CMT	1	DRLIN1	RIG UP HALLIBURTON LINES
	06:00 - 08:00	2.00	CMT	1	CSGIN1	RIG UP HALLIBURTON CEMENT HEAD & LINES
	08:00 - 10:00	2.00	CIRC	1	CSGIN1	CIRC. BOTTOMS UP THRU "A" SECTION WELLHEAD
	10:00 - 11:00	1.00	CMT	2	CSGIN1	HOLD SAFETY MEETING & PRESSURE TEST CEMENT LINES TO 6000 PSI, N2 LINES TO 8000 PSI
	11:00 - 16:00	5.00	CMT	2	CSGIN1	CEMENT CSG WITH 1435 SX FOAMED CEMENT , 230 SX UNFOAMED TAIL & 200 SX CAP CEMENT. PLUG DID NOT BUMP, FLOATS HELD, RECOVERD 180 BBLS FOAMED CEMENT BACK TO SURFACE
	16:00 - 18:00	2.00	CMT	1	CSGIN1	RIG DOWN CEMENTERS & LAY DOWN CEMENT ISOLATION TOOL
	18:00 - 23:30	5.50	BOP	2	CSGIN1	PRESSURE TEST BOP- 10000 HI, 250 LOW, ANNULAR- 5000, CSG- 1500
	23:30 - 00:00	0.50	BOP	2	CSGIN1	INSTALL WEAR BUSHING
	00:00 - 01:00	1.00	TRP	2	DRLIN2	PICK UP & SURFACE TEST MUD MOTOR
	01:00 - 03:30	2.50	TRP	2	DRLIN2	TRIP IN, FILL PIPE & BREAK CIRC. EVERY 2000'

Operations Summary Report

Legal Well Name: WV 15D-23-8-21
 Common Well Name: WV 15D-23-8-21
 Event Name: DRILLING
 Contractor Name: Unit Drilling Co.
 Rig Name: UNIT

Spud Date: 6/9/2008
 Start: 6/9/2008
 End:
 Rig Release:
 Group:
 Rig Number: 109

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
7/25/2008	03:30 - 04:00	0.50	TRP	2	DRLIN2	INSTALL ROT. HEAD ELEMENT
	04:00 - 04:30	0.50	TRP	2	DRLIN2	TRIP IN, TAGGED CEMENT @ 4855'
	04:30 - 06:00	1.50	DRL	1	DRLIN2	DRILL CEMENT @ 4950'
7/26/2008	06:00 - 08:30	2.50	DRL	4	DRLIN2	DRILL CEMENT & FLOAT COLLAR F/ 4990'-5130'
	08:30 - 09:30	1.00	RIG	1	DRLIN2	LUBRICATE RIG & TOP DRIVE, FUNCTION COM
	09:30 - 10:00	0.50	DRL	4	DRLIN2	DRILL CEMENT & SHOE F/ 5130'-5175'
	10:00 - 10:30	0.50	DRL	1	DRLIN2	DRILL F/ 5175'-5185', WOB- 16K, RPM- 125 COMBINED, GPM- 425, MW- 9, VIS- 32
	10:30 - 11:30	1.00	EQT	2	DRLIN2	CIRC. & FIT TO 13.5 EQUIVALENT (OK)
	11:30 - 18:30	7.00	DRL	1	DRLIN2	DRILL F/ 5185'-5345', WOB- 22-26K, RPM- 125 COMBINED, GPM- 470, MW- 9, VIS- 31
	18:30 - 19:00	0.50	REAM	1	DRLIN2	WORK THRU TIGHT HOLE F/ 5345'-5310'
	19:00 - 06:00	11.00	DRL	1	DRLIN2	DRILL F/ 5345'-5468', WOB- 24-28K, RPM- 125 COMBINED, GPM- 470, MW- 8.9, VIS- 32, BG GAS- 20u, CONN GAS- 50u, SEEPING 4 BBLS/HR
7/27/2008	06:00 - 14:30	8.50	DRL	1	DRLIN2	DRILL F/ 5468'-5590', WOB- 28-32K, RPM- 120 COMBINED, GPM- 470, MW- 8.9, VIS- 34, SEEPING 4 BBLS/HR
	14:30 - 15:30	1.00	RIG	1	DRLIN2	LUBRICATE RIG & TOP DRIVE, FUNCTION HCR & COM
	15:30 - 16:00	0.50	SUR	1	DRLIN2	DROP SURVEY & PUMP TRIP SLUG
	16:00 - 16:30	0.50	TRP	10	DRLIN2	TRIP OUT 10 STDS
	16:30 - 17:00	0.50	TRP	10	DRLIN2	PULL ROT. HEAD ELEMENT
	17:00 - 17:30	0.50	TRP	10	DRLIN2	TRIP OUT
	17:30 - 18:00	0.50	RIG	2	DRLIN2	REPAIR AIR LINE ON LOW DRUM CLUTCH
	18:00 - 19:00	1.00	TRP	10	DRLIN2	TRIP OUT F/ BIT #5, HOLE FILL 22 BBLS OVER CALCULATED
	19:00 - 19:30	0.50	TRP	1	DRLIN2	BREAK BIT & LAY DOWN MUD MOTOR, FUNCTIONED BLIND RAMS
	19:30 - 20:00	0.50	TRP	1	DRLIN2	PICK UP & SURFACE TEST MUD MOTOR
	20:00 - 21:30	1.50	TRP	10	DRLIN2	TRIP IN TO CSG SHOE, FILL PIPE & BREAK CIRC. EVERY 2000'
	21:30 - 22:00	0.50	TRP	10	DRLIN2	INSTALL ROT. HEAD ELEMENT
	22:00 - 23:30	1.50	RIG	6	DRLIN2	CUT DRLG LINE
	23:30 - 00:00	0.50	REAM	1	DRLIN2	WASH 90' TO BOTTOM
	00:00 - 06:00	6.00	DRL	1	DRLIN2	DRILL F/ 5590'-5745', WOB- 10/12K, RPM- 130 COMBINED, GPM- 385, MW- 8.9, VIS- 34, SEEPING 4 BBLS/HR, BG GAS- 25u, CONN GAS- 40u
7/28/2008	06:00 - 12:00	6.00	DRL	1	DRLIN2	DRILL F/ 5745'-5957', WOB- 12K, RPM- 148 COMBINED, GPM- 450, MW- 9, VIS- 34, BG GAS- 40u, CONN GAS- 100u, SEEPING 2-3 BBLS/HR, PUMPING BIT BALLING SWEEPS AS NEEDED.
	12:00 - 13:00	1.00	RIG	1	DRLIN2	LUBRICATE RIG & TOP DRIVE, FUNCTION ANNULAR & COM
	13:00 - 06:00	17.00	DRL	1	DRLIN2	DRILL F/ 5957'-6573', WOB- 12-14K, RPM- 148 COMBINED, GPM- 470, MW- 9, VIS- 35, BG GAS- 40u, CONN GAS- 100u, SEEPING 2-3 BBLS/HR, PUMPING BIT BALLING SWEEPS AS NEEDED
7/29/2008	06:00 - 15:00	9.00	DRL	1	DRLIN2	DRILL F/ 6573'-6940', WOB- 12-15K, RPM- 160 COMBINED, GPM- 470, MW- 9.1, VIS- 34, BG GAS- 40u, CONN GAS- 80u, SEEPING 2-3 BBLS/HR, PUMPING BIT BALLING SWEEPS AS NEEDED.
	15:00 - 16:00	1.00	RIG	1	DRLIN2	LUBRICATE RIG & TOP DRIVE, FUNCTION TOP PIPE RAMS & COM
	16:00 - 06:00	14.00	DRL	1	DRLIN2	DRILL F/ 6940'-7325', WOB- 14/16K, RPM- 140/160 COMBINED, GPM- 385/470, MW- 9.1, VIS- 34, BG GAS- 45u, CONN GAS- 180u, LOST 80 BBLS @ 7115, PUMPED TWO 30 BBL SWEEPS WITH 10% LCM, CURRENTLY LOSING 6-8 BBLS/HR & PUMPING 10 BBL LCM SWEEPS HOURLY & BIT BALLING SWEEPS AS NEEDED.
7/30/2008	06:00 - 07:00	1.00	DRL	1	DRLIN2	DRILL F/ 7325'-7372', WOB- 14/15K, RPM- 150 COMBINED, GPM- 428, MW- 9.2, VIS- 34, BG GAS- 40, SEEPING 6-8 BBLS/HR, PUMPING 10 BBL LCM SWEEPS HOURLY
	07:00 - 07:30	0.50	RIG	3	DRLIN2	REMOVE SUCTION SCREENS FROM PUMP SUCTIONS

Operations Summary Report

Legal Well Name: WV 15D-23-8-21

Common Well Name: WV 15D-23-8-21

Event Name: DRILLING

Contractor Name: Unit Drilling Co.

Rig Name: UNIT

Start: 6/9/2008

Rig Release:

Rig Number: 109

Spud Date: 6/9/2008

End:

Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
7/30/2008	07:30 - 11:30	4.00	DRL	1	DRLIN2	DRILL F/ 7372'-7559', DRLG WITH SAME PARAMETERS, MW & VIS, SEEPING 5-6 BBLs/HR, PUMPING 10 BB LCM SWEEPS HOURLY
	11:30 - 12:30	1.00	RIG	1	DRLIN2	LUBRICATE RIG & TOP DRIVE, FUNCTION BOTTOM PIPE RAMS & COM
	12:30 - 06:00	17.50	DRL	1	DRLIN2	DRILL F/ 7559'-7925', WOB- 14/20K, RPM- 150 COMBINED, GPM- 428, MW- 9.2, VIS- 35, BG GAS- -55u, CONN GAS- 430u, SEEPING 5-6 BBLs/HR, PUMPING BIT BALLING & LCM SWEEPS AS NEEDED
7/31/2008	06:00 - 16:30	10.50	DRL	1	DRLIN2	DRILL FROM 7925 TO 8121
	16:30 - 17:30	1.00	RIG	1	DRLIN2	SERVICE RIG AND TOP DRIVE
	17:30 - 18:00	0.50	DRL	1	DRLIN2	DRILL FROM 8121 TO 8150
	18:00 - 23:30	5.50	DRL	1	DRLIN2	DRILL FROM 8150 TO 8245
	23:30 - 00:30	1.00	DRL	1	DRLIN2	SLOW PUMP RATES AND CONNECTIONS FOR BOTH TOURS
	00:30 - 06:00	5.50	DRL	1	DRLIN2	DRILL FROM 8245 TO 8320 - PUMPING 10 BBL BIT BALLING SWEEPS WHEN NEEDED
8/1/2008	06:00 - 14:30	8.50	DRL	1	DRLIN2	DRILL FROM 8320 TO 8492
	14:30 - 15:30	1.00	RIG	1	DRLIN2	SERVICE RIG AND TOP DRIVE
	15:30 - 18:00	2.50	DRL	1	DRLIN2	DRILL FROM 8492 TO 8579
	18:00 - 23:30	5.50	DRL	1	DRLIN2	DRILL FROM 8579 TO 8676
	23:30 - 00:30	1.00	DRL	1	DRLIN2	SPR AND CONNECTIONS FOR BOTH CREWS
	00:30 - 06:00	5.50	DRL	1	DRLIN2	DRILL FROM 8676 TO 8810 - BG GAS NOW UP TO 300 UNITS
8/2/2008	06:00 - 16:30	10.50	DRL	1	DRLIN2	DRILL FROM 8810 TO 9047
	16:30 - 17:30	1.00	RIG	1	DRLIN2	SERVICE RIG AND TOP DRIVE
	17:30 - 18:00	0.50	DRL	1	DRLIN2	DRILL FROM 9047 TO 9070
	18:00 - 22:30	4.50	DRL	1	DRLIN2	DRILL FROM 9070 TO 9171
	22:30 - 23:30	1.00	DRL	1	DRLIN2	SPR AND CONNECTIONS FOR BOTH TOURS
	23:30 - 06:00	6.50	DRL	1	DRLIN2	DRILL FROM 9171 TO 9310 - VERY AMAZED AS THIS BIT OUT DRILLING NEW BIT FROM OFFSET AT THIS DEPTH
8/3/2008	06:00 - 17:00	11.00	DRL	1	DRLIN2	DRILL FROM 9310 TO 9575
	17:00 - 18:00	1.00	RIG	1	DRLIN2	SERVICE RIG AND TOP DRIVE
	18:00 - 22:30	4.50	DRL	1	DRLIN2	DRILL FROM 9575 TO 9656 - STARTED WT. UP MUD TO 9.4 DUE TO BG GAS, STARTED LOSING MUD AT 30 BBLs PER HOUR, LOST 90 BBLs, LOWERED STROKES AND PUMPED LCM SWEEPS, WE HAVE IT SLOWED DOWN, AT 9650 HAD HIGH TORQUE WITH HIGH PSI SPIKE, SET BACK ON BOTTOM HAD ALL PSI, PREPARE FOR TRIP OUT, NOT WORRIED ON BIT BUT WORRIED ON MM.
	22:30 - 23:30	1.00	CIRC	1	DRLIN2	CIRCULATE BOTTOMS UP FOR SURVEY
	23:30 - 00:00	0.50	SUR	1	DRLIN2	DROP SURVEY
	00:00 - 01:00	1.00	CIRC	1	DRLIN2	CIRCULATE BOTTOMS UP FROM SURVEY TIME WHILE BUILDING PILL AND FILLING TRIP TANK
	01:00 - 01:30	0.50	CIRC	1	DRLIN2	SPOT 120 BBLs OF 18% LCM AND PUMP TRIP SLUG
	01:30 - 03:30	2.00	TRP	10	DRLIN2	TRIP OUT FOR BIT, ONE TIGHT SPOT 3RD STAND FROM BOTTOM, PULLED RIGHT THRU
	03:30 - 04:00	0.50	BOP	1	DRLIN2	PULL RT HEAD
	04:00 - 06:00	2.00	TRP	10	DRLIN2	TRIP TO BHA FOR INSPECTION, WILL CHANGE OUT DRILLING JARS AND MM - BIT
8/4/2008	06:00 - 08:00	2.00	TRP	10	DRLIN2	TRIP BHA OUT AS INSPECTORS ARE LATE - FUNCTION ALL BOP EQUIPMENT AS PER BLM REQUIREMENTS
	08:00 - 09:00	1.00	TRP	1	DRLIN2	HANDLE BHA - CHANGE OUT MM, BIT AND JARS
	09:00 - 09:30	0.50	CIRC	1	DRLIN2	SURFACE TEST MM
	09:30 - 15:00	5.50	ISP	1	DRLIN2	INSPECT DC AND 44 HWDP - ALL OK
	15:00 - 17:00	2.00	TRP	2	DRLIN2	TRIP TO SHOE
	17:00 - 17:30	0.50	BOP	1	DRLIN2	INSTALL RT. HEAD
	17:30 - 18:00	0.50	CIRC	1	DRLIN2	CIRCULATE OUT TRIP SLUG AT SHOE

Operations Summary Report

Legal Well Name: WV 15D-23-8-21

Common Well Name: WV 15D-23-8-21

Event Name: DRILLING

Contractor Name: Unit Drilling Co.

Rig Name: UNIT

Spud Date: 6/9/2008

Start: 6/9/2008

End:

Rig Release:

Group:

Rig Number: 109

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
8/4/2008	18:00 - 19:00	1.00	TRP	2	DRLIN2	TRIP TO 7700 FEET
	19:00 - 19:30	0.50	CIRC	1	DRLIN2	FILL PIPE AND CIRCULATE MUD UP HOLE FOR 10 MINUTES
	19:30 - 20:30	1.00	TRP	2	DRLIN2	TRIP TO TWO STANDS FROM BOTTOM -
	20:30 - 21:30	1.00	REAM	1	DRLIN2	WASH AND REAM 180' TO BOTTOM - TIGHT SPOT AT 9568
	21:30 - 22:30	1.00	RIG	1	DRLIN2	SERVICE RIG AND TOP DRIVE WHILE CIRCULATING BOTTOMS UP
	22:30 - 06:00	7.50	DRL	1	DRLIN2	DRILL FROM 9656 TO 9941 - HOPEFULLY START SNEEING UP ON YOU KNOW WHO. STARTED LOSING MUD AT 9915, SWEEPING HOLE WITH 15% LCM AND TREATING HOURLY - NOW LOSING 30 BBLS PER HOUR
8/5/2008	06:00 - 18:00	12.00	DRL	1	DRLIN2	DRILL FROM 9941 TO 10140
	18:00 - 18:30	0.50	DRL	1	DRLIN2	DRILL FROM 10140 TO 10157
	18:30 - 19:30	1.00	DRL	1	DRLIN2	SPR AND CONNECTIONS FOR BOTH CREWS
	19:30 - 04:00	8.50	DRL	1	DRLIN2	DRILL FROM 10157 TO 10345
	04:00 - 05:00	1.00	RIG	1	DRLIN2	SERVICE RIG AND TOP DRIVE
	05:00 - 06:00	1.00	DRL	1	DRLIN2	DRILL FROM 10345 TO 10375 LOSING MUD AT 12 TO 15 BBLS PER HOUR - MUD WT IS NOW 9.85 - HOLE IS VERY SENSITIVE LIKE ME. #1 SHAKER STILL BYPASSED, 1% LCM IN SYSTEM, RUNNING ALL SOLIDS CONTROL, WILL CLEAN SAND TRAP THIS AM AND POSSIBLY SHAKER TANK - WILL START BUILDING REPLACEMENT MUD IN PILL TANK
8/6/2008	06:00 - 10:30	4.50	DRL	1	DRLIN2	DRILL FROM 10375 TO 10468
	10:30 - 11:30	1.00	RIG	1	DRLIN2	SERVICE RIG AND TOP DRIVE
	11:30 - 12:30	1.00	LOC	7	DRLIN2	CLEAN SHALE AND SHAKER TANKS DUE TO HAVING ONE SHAKER BYPASSED
	12:30 - 18:00	5.50	DRL	1	DRLIN2	DRILL FROM 10468 TO 10589
	18:00 - 20:00	2.00	DRL	1	DRLIN2	DRILL FROM 10589 TO 10652
	20:00 - 21:00	1.00	DRL	1	DRLIN2	CHANGE OUT KELLY JOINT - SPR AND CONNECTIONS FOR BOTH CREWS
8/7/2008	21:00 - 06:00	9.00	DRL	1	DRLIN2	DRILL FROM 10652 TO 10850 - NO LOSSES LAST 4.5 HOURS - MUD WT. NOW 9.9 -
	06:00 - 13:00	7.00	DRL	1	DRLIN2	DRILL FROM 10850 TO 10962
	13:00 - 14:00	1.00	DRL	1	DRLIN2	SLOW PUMP RATES AND CONNECTIONS - CHANGE OUT KELLY JOINT
	14:00 - 16:00	2.00	DRL	1	DRLIN2	DRILL FROM 10962 TO 11023
	16:00 - 17:00	1.00	RIG	1	DRLIN2	SERVICE RIG AND TOP DRIVE
	17:00 - 18:00	1.00	DRL	1	DRLIN2	DRILL FROM 11023 TO 11040
8/8/2008	18:00 - 01:30	7.50	DRL	1	DRLIN2	DRILL FROM 11040 TO 11133
	01:30 - 02:30	1.00	SUR	1	DRLIN2	DROP SURVEY - SURVEY DEPTH = 11040 - LAY TWO JOINTS FROM STRING DOWN WHILE WAITING ON SURVEY
	02:30 - 03:30	1.00	CIRC	1	DRLIN2	CIRCULATE BOTTOMS UP FROM SURVEY TIME
	03:30 - 04:00	0.50	CIRC	1	DRLIN2	PUMP 120BBLS OF 1# OVER RCD PILL WITH 15% LCM - TOP OFF WITH TRIP SLUG
	04:00 - 06:00	2.00	TRP	10	DRLIN2	TRIP OUT OF HOLE - AT 0430 WE AT 9500' - SEGO CAME IN AT 11023 - BIT SLOWED IN BUCK TONGUE JUST ABOVE CASTLE GATE
	06:00 - 06:30	0.50	TRP	10	DRLIN2	TRIP TO SHOE
8/8/2008	06:30 - 07:00	0.50	BOP	1	DRLIN2	PULL RT. HEAD
	07:00 - 09:00	2.00	TRP	10	DRLIN2	FINISH TRIP OUT
	09:00 - 10:00	1.00	TRP	1	DRLIN2	CHANGE OUT MM AND BIT
	10:00 - 10:30	0.50	CIRC	1	DRLIN2	SURFACE TESI MM
	10:30 - 12:30	2.00	TRP	2	DRLIN2	TRIP BHA IN AND CIRCULATE FOR FIVE MINUTES, TRIP TO 3500' AND CIRCULATE FOR TEN MINUTES
	12:30 - 13:30	1.00	RIG	1	DRLIN2	SERVICE RIG AND TOP DRIVE, ALSO REPAIR AIR LEAD IN LOW

Operations Summary Report

Legal Well Name: WV 15D-23-8-21

Common Well Name: WV 15D-23-8-21

Event Name: DRILLING

Contractor Name: Unit Drilling Co.

Rig Name: UNIT

Start: 6/9/2008

Rig Release:

Rig Number: 109

Spud Date: 6/9/2008

End:

Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
8/8/2008	12:30 - 13:30	1.00	RIG	1	DRLIN2	DRUM CLUTCH
	13:30 - 14:30	1.00	TRP	2	DRLIN2	TRIP TO SHOE
	14:30 - 15:00	0.50	BOP	1	DRLIN2	INSTALL RT. HEAD
	15:00 - 16:30	1.50	RIG	6	DRLIN2	CUT DRILL LINE
	16:30 - 17:00	0.50	CIRC	1	DRLIN2	CIRCULATE BOTTOMS UP AT SHOE
	17:00 - 18:00	1.00	TRP	2	DRLIN2	TRIP INTO HOLE TO 8200 AND CIRCULATE FOR 20 MINUTES
	18:00 - 20:30	2.50	TRP	2	DRLIN2	TRIP TO ONE STAND FROM BOTTOM
	20:30 - 22:00	1.50	REAM	1	DRLIN2	SAFETY WASH AND REAM 81' TO BOTTOM, 2 FEET OF FILL, CIRCULATE OUT GAS
	22:00 - 06:00	8.00	DRL	1	DRLIN2	DRILL FROM 11133 TO 11275 - CASTLEGATE CAME IN AT 11154 - BLACKHAWK SHOULD COME IN AT 11454 LEAVING TD AROUND 12000' - RUSS WILL BE HERE TODAY - MUD WT IS NOW 10.75 AND WILL STAY THERE UNTIL MORE IS NEEDED
8/9/2008	06:00 - 10:30	4.50	DRL	1	DRLIN2	DRILL FROM 11275 TO 11331
	10:30 - 11:00	0.50	DRL	1	DRLIN2	KELLY JOINT - SPR AND CONNECTIONS
	11:00 - 17:00	6.00	DRL	1	DRLIN2	DRILL FROM 11331 TO 11424
	17:00 - 18:00	1.00	RIG	1	DRLIN2	SERVICE RIG AND TOP DRIVE
	18:00 - 02:30	8.50	DRL	1	DRLIN2	DRILL FROM 11484 TO 11518 - AT 11450 TOOK ON WATER FLOW FROM CASTLE GATE (90 BBLs) BIT SLOWED AND TORQUED WITH PSI SPIKE
	02:30 - 03:30	1.00	CIRC	1	DRLIN2	CIRCULATE BOTTOMS UP FOR TRIP
	03:30 - 04:00	0.50	CIRC	1	DRLIN2	SPOT LCM ECD PILL AND TRIP SLUG
	04:00 - 06:00	2.00	TRP	10	DRLIN2	TRIP OUT FOR BIT - STARTED PICKING EXTRA TORQUE AND PSI SPIKE - WE ARE JUST IN TO THE BLACKHAWK EQUIVLENT WHICH CAME IN AT 11480
8/10/2008	06:00 - 06:30	0.50	TRP	10	DRLIN2	TRIP OUT TO SHOE
	06:30 - 07:00	0.50	BOP	1	DRLIN2	PULL RT HEAD
	07:00 - 09:00	2.00	TRP	10	DRLIN2	FINISH TRIP OUT
	09:00 - 10:00	1.00	TRP	1	DRLIN2	DRAIN AND LD MM AND BIT - BIT RING OUT - CLEAN FLOOR - PICK UP SAME
	10:00 - 10:30	0.50	CIRC	1	DRLIN2	SURFACE TEST MM
	10:30 - 13:30	3.00	TRP	2	DRLIN2	TRIP BHA AND DRILL PIPE TO SHOE - FILL AND CIRC. AT BHA - 2500' AND 5200
	13:30 - 14:00	0.50	BOP	1	DRLIN2	CHANGE AND INSTALL RT. HEAD
	14:00 - 14:30	0.50	CAV	1	DRLIN2	CIRCULATE OUT TRIP SLUG AT SHOE
	14:30 - 17:00	2.50	TRP	2	DRLIN2	TRIP IN TO HOLE - BREAK CIRC. AT 8500'
	17:00 - 18:00	1.00	REAM	1	DRLIN2	SAFETY WASH AND REAM 90' TO BOTTOM - STAGE PUMPS UP TO DRILLING GALLONS
	18:00 - 19:00	1.00	RIG	1	DRLIN2	SERVICE RIG AND TOP DRIVE
	19:00 - 06:00	11.00	DRL	1	DRLIN2	DRILL FROM 11518 TO 11775 - BLACKHAWK D GAVE NICE GAS POP WITH 40' FLARE BUT WILL STAY WITH 10.7 MUD WT. KENNELWORTH COMING NEXT AT 11880 WITH OUR NEXT POSSIBLE LOSS ZONE AT 11950 - 8' DRILLING FLARE ON BUSTER
8/11/2008	06:00 - 07:30	1.50	DRL	1	DRLIN2	DRILL FROM 11775 TO 11797
	07:30 - 08:00	0.50	DRL	1	DRLIN2	CHANGE OUT KELLY JOINT AND SLOW PUMP RATES
	08:00 - 12:30	4.50	DRL	1	DRLIN2	DRILL FROM 11797 TO 11858
	12:30 - 13:30	1.00	RIG	1	DRLIN2	SERVICE RIG AND TOP DRIVE
	13:30 - 18:00	4.50	DRL	1	DRLIN2	DRILL FROM 11858 TO 11925
	18:00 - 20:00	2.00	DRL	1	DRLIN2	DRILL FROM 11925 TO 11978 - LOST PARTIAL RETURNS AT 11960, GOT BACK TO FULL WITH SWEEP - KEPT DRILLING AND LOST FULL RETURNS - GO TO SLOW PUMP RATE AND ALL 18 % LCM FROM PREMIX TANK - BYPASS BOTH SHAKERS
	20:00 - 00:30	4.50	CIRC	2	DRLIN2	LOST FULL RETURNS - PUMP 20% LCM DOWN HOLE, REGAIN

Operations Summary Report

Legal Well Name: WV 15D-23-8-21
 Common Well Name: WV 15D-23-8-21
 Event Name: DRILLING
 Contractor Name: Unit Drilling Co.
 Rig Name: UNIT

Start: 6/9/2008
 Rig Release:
 Rig Number: 109
 Spud Date: 6/9/2008
 End:
 Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
8/11/2008	20:00 - 00:30	4.50	CIRC	2	DRLIN2	SOME CIRCULATION - BUILD VOLUME - LOST 625 AT FIRST
	00:30 - 04:30	4.00	DRL	1	DRLIN2	DRILL FROM 11978 TO 12042 - LOST ANOTHER 67 BBLS - HOLDING AT PRESENT
8/12/2008	04:30 - 05:30	1.00	CIRC	1	DRLIN2	CIRCULATE BOTTOMS UP FOR SHORT TRIP
	05:30 - 06:00	0.50	TRP	14	DRLIN2	SHORT TRIP 20 STANDS
	06:00 - 07:30	1.50	TRP	14	DRLIN2	SHORT TRIP 15 STANDS OUT AND IN - HOLE OK
	07:30 - 08:00	0.50	SUR	1	DRLIN2	DROP SURVEY
	08:00 - 10:00	2.00	CIRC	1	DRLIN2	CIRCULATE BOTTOMS UP AND SPOT LCM-ECD PILL ALONG WITH TRIP SLUG
	10:00 - 14:00	4.00	TRP	2	DRLIN2	START TRIP OUT FOR LOGS - STRAP OUT
	14:00 - 14:30	0.50	BOP	1	DRLIN2	PULL RT. HEAD
	14:30 - 17:30	3.00	TRP	2	DRLIN2	FINISH TRIP OUT - LAST 3 STANDS WET
	17:30 - 18:00	0.50	TRP	1	DRLIN2	DRAIN MM - LD BIT - PULL SURVEY TOOL
	18:00 - 18:30	0.50	BOP	1	DRLIN2	PULL WEAR BUSHING
8/13/2008	18:30 - 19:30	1.00	LOG	1	DRLIN2	HOLD SAFETY MEETING - RIG UP LOGGING ADAPTER AND LOGGERS
	19:30 - 00:30	5.00	LOG	1	DRLIN2	RUN LOGS IN - LOGS STOPPED AT 7356 - PULL OUT AND ATTEMPT SLICK RUN WITH NO LUCK
	00:30 - 01:00	0.50	LOG	1	DRLIN2	RIG DOWN LOGGERS
	01:00 - 02:00	1.00	RIG	1	DRLIN2	SERVICE RIG AND TOP DRIVE
	02:00 - 02:30	0.50	RIG	8	DRLIN2	CHANGE OUT LOAD CELL ON TORQUE UNIT
	02:30 - 05:00	2.50	TRP	2	DRLIN2	PICK UP BHA AND TRIP TO 3500' - FILL AT 600 - 1700 - AND CIRC.
	05:00 - 05:30	0.50	CIRC	1	DRLIN2	KELLY UP AND CIRC. HOLE
	05:30 - 06:00	0.50	TRP	2	DRLIN2	TRIP IN TO HOLE SLOWLY - NOT OVER 20% FLOW ON WAY IN
	06:00 - 06:30	0.50	BOP	1	DRLIN2	INSTALL RT. HEAD AT SHOE
	06:30 - 07:00	0.50	CIRC	1	DRLIN2	CIRCULATE BOTTOMS UP AT SHOE
	07:00 - 08:30	1.50	TRP	2	DRLIN2	STAGE IN TO HOLE
	08:30 - 09:00	0.50	REAM	1	DRLIN2	SEEN TIGHT SPOT WHERE LOGGERS DID AT 7345 - WENT RIGHT THRU - WORKED A FEW TIMES - OK
	09:00 - 11:30	2.50	TRP	2	DRLIN2	TRIP IN TO HOLE TO
	11:30 - 13:00	1.50	REAM	1	DRLIN2	WASH AND REAM TWO DIFFERANT SPOTS AT 7915 AND 11870 - BOTH VERY SOFT - WASHED AND REAMED THE WHOLE STANDS
	13:00 - 14:30	1.50	CIRC	1	DRLIN2	CIRCULATE TWO BOTTOMS UP AND CONDITION MUD
	14:30 - 15:00	0.50	CIRC	1	DRLIN2	SPOT LCM, ECD AND TRIP SLUG
	15:00 - 18:00	3.00	TRP	2	DRLIN2	TRIP OUT FOR LOGS - NO TIGHT SPOTS YET
	18:00 - 21:00	3.00	TRP	2	DRLIN2	FINISH TRIP OUT
8/14/2008	21:00 - 21:30	0.50	LOG	1	DRLIN2	HOLD SAFETY MEETING AND RIG UP LOGGERS
	21:30 - 06:00	8.50	LOG	1	DRLIN2	LOG OPEN HOLE - FIRST RUN OK - AT 0500 WILL BE ON BOTTOM WITH LAST RUN - TOTAL GAIN IN TRIP TANK IS AT PRESENT WITH WIRE LINE CLOSE TO BOTTOM = 10.10 BBLS - 0500 SECOND RUN TAGGES BOTTOM AND IS NOW 800' FROM BOTTOM LOGGING UP
	06:00 - 08:00	2.00	LOG	1	EVAL 2	FINISH LOGS
	08:00 - 08:30	0.50	LOG	1	EVAL 2	RIG LOGGERS DOWN
	08:30 - 09:30	1.00	RIG	1	EVAL 2	SERVICE RIG AND TOP DRIVE
	09:30 - 12:30	3.00	TRP	2	EVAL 2	TRIP BHA AND PIPE TO SHOE
	12:30 - 13:00	0.50	BOP	1	EVAL 2	INSTALL RT HEAD
	13:00 - 13:30	0.50	CIRC	1	EVAL 2	CIRCULATE BOTTOMS UP
	13:30 - 16:30	3.00	TRP	2	EVAL 2	TRIP TO BOTTOM - FILL AND CIRCULATE EVERY 25 STANDS
	16:30 - 17:00	0.50	REAM	1	EVAL 2	SAFETY WASH AND REAM TO BOTTOM - NO FILL
8/14/2008	17:00 - 18:00	1.00	CIRC	1	EVAL 2	CIRCULATE AND CONDITION MUD FOR LDDP AND RUNNING OF CASING
	18:00 - 19:30	1.50	CIRC	1	EVAL 2	CIRCULATE AND CONDITION MUD - BOTTOMS UP = 3000 UNITS GAS ON BUSTER WITH 36 BBL GAIN AND 35' FLARE

Operations Summary Report

Legal Well Name: WV 15D-23-8-21
 Common Well Name: WV 15D-23-8-21
 Event Name: DRILLING
 Contractor Name: Unit Drilling Co.
 Rig Name: UNIT

Spud Date: 6/9/2008
 Start: 6/9/2008
 End:
 Rig Release:
 Group:
 Rig Number: 109

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
8/14/2008	19:30 - 20:00	0.50	CIRC	1	EVAL 2	HOLD SAFETY MEETING WIT LD CREW, PUMP AND SPOT LCM, ECD AND TRIP SLUG
	20:00 - 21:00	1.00	TRP	2	EVAL 2	TRIP FIVE STANDS OUT AND RIG LD CREW
	21:00 - 04:30	7.50	TRP	3	EVAL 2	LDDP
8/15/2008	04:30 - 05:00	0.50	BOP	1	EVAL 2	PULL RT. HEAD
	05:00 - 06:00	1.00	TRP	3	EVAL 2	LDDP AND POSSIBLY START ON BHA - AT 0500 WE ARE AT 2000'
	06:00 - 07:30	1.50	TRP	1	CSGIN2	FINISH LD OF STRING
	07:30 - 08:30	1.00	RIG	7	CSGIN2	CLEAN RIG FLOOR AND HOLD SAFETY MEETING WITH ALL CREWS
	08:30 - 09:30	1.00	CSG	1	CSGIN2	RIG UP CASING CREW
	09:30 - 18:00	8.50	CSG	2	CSGIN2	RUN CASING - CREEP CASING IN TO HOLE - DID NOT HELP - LOST RETURNS TWICE TO 2200' THE WE LOST IT FOR GOOD AT 3300' - BUILD 600 BBLS TO MAKE IT TO BOTTOM - BACKSIDE STAYS FULL BUT LOSE ALL CAP. AND DISP. GOING IN TO HOLE THEN FILL PIPE AND 30 STROKES EXTRA EVERY 700' TO FLOATS OPEN
	18:00 - 21:30	3.50	CSG	2	CSGIN2	FINISH RUNNING CASING - CIRCULATE LAST TWO JOINTS DOWN
	21:30 - 22:00	0.50	CSG	2	CSGIN2	CIRCULATE AND LAND LANDING JOINT - NO RETURNS
	22:00 - 22:30	0.50	CIRC	1	CSGIN2	RIG UP CIRCULATION HOSE FOR PUMPING 25 STROKES EVERY 20 MINUTES SO WE DONT PLUG FLOATS
	22:30 - 23:30	1.00	CSG	1	CSGIN2	RIG DOWN CASING CREW
	23:30 - 03:00	3.50	CMT	1	CSGIN2	PACK OFF WELLHEAD - TEST TO 9000 PSI - SET CEMENT ISOLATION TOOL - FILL STACK AND CLOSE BAG
	03:00 - 03:30	0.50	CMT	1	CSGIN2	RIG UP CEMENTERS AND HOLD SAFETY MEETING
	03:30 - 06:00	2.50	CMT	1	CSGIN2	WAIT ON HALLIBURTON AS N2 TRUCK LOST ALL HYDRAULICS - WAITING ON TRUCK FROM VERNAL OR ROCKSPRINGS - EVERY 20 MIN. WE ARE PUMPING 20 STROKES TO KEEP FLOATS OPEN FROM LCM - COULD BE WAITING ANYWHERE FROM 3 TO 7 HOURS FOR REPLACEMENT TRUCK
	06:00 - 06:30	0.50	CMT	1	CSGIN2	CHANGE OUT SAVER SUB - RESET TOP DRIVE PSI FOR 4" PIPE WHILE WAITING ON HALLIBURTON
8/16/2008	06:30 - 07:00	0.50	CMT	1	CSGIN2	HELD SAFETY MEETING WITH CEMENTERS
	07:00 - 13:00	6.00	CMT	2	CSGIN2	PRESSURE TEST LINE TO 6000 PSI - 50 BBL SPACER AT 5 BPM - 30 BBLS SCAVENGER CEMENT AT 5 BPM - LEAD = 150 BBLS AT 5 BPM - 2ND LEAD = 380 BBLS AT 5 BPM - TAIL = 54 BBLS AT 5 BPM - DROP PLUG - DISPLACE WITH FRESH WATER MUD (10.75) - PSI = 1024 - BUMP PLUG TO 1550 - HOLD FOR 1/2 HOUR - FLOAT HELD - PUMP CAP = 55 BBLS AT 3 BPM - 3 BBLS WATER DISP. - START CAP PSI = 600 - FINISH CAP PSI = 460
	13:00 - 14:00	1.00	CMT	1	CSGIN2	RIG DOWN CEMENTERS
	14:00 - 17:30	3.50	LOC	7	CSGIN2	START CLEANING PITS - START CHANGING OUT KOOMEY REMOTE CORD, OLD ONE HAS ELEVEN SPLICES - CHANGE OUT QUICK RELEASE ON LOW DRUM CLUTCH - CHANGE OUT PONY ROD SEALS ON #2 PUMP - CHANGE OUT PUMP ON HIGH SPEED CENT. - HAVE WELDER REPAIR ADGITATOR BLADES ON #4
	17:30 - 18:00	0.50	BOP	2	CSGIN2	RIG UP TESTER WHILE STILL CLEANING TANKS
	18:00 - 06:00	12.00	BOP	2	CSGIN2	TEST BOP'S - HAVE TRIED 3 DIFFERANT TEST PLUGS AND NONE WILL TEST - STACK IS SPIT CLEAN - TAKE TEST PLUG AND WRAP TEFLON IN SEAL GROOVE, STREACH NEW SEAL OVER PLUG AND SET - NOW HOLDING, CONTINUE WITH TEST - FINISHED
						CLEANING PITS AT 2200. CHANGE OUT ALL GUN LINE VALVES (12) - SOLIDS CONTROL HOOKED UP, RESERVE PIT WILL BE BLOCKED OF BY 0800, TESTERS DONE BY 0800, WILL INSTALL WEAR BUSHING AND START PICKING UP BHA IN A COUPLE OF

Operations Summary Report

Legal Well Name: WV 15D-23-8-21
 Common Well Name: WV 15D-23-8-21
 Event Name: DRILLING
 Contractor Name: Unit Drilling Co.
 Rig Name: UNIT

Spud Date: 6/9/2008
 Start: 6/9/2008
 End:
 Rig Release:
 Group:
 Rig Number: 109

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
8/16/2008	18:00 - 06:00	12.00	BOP	2	CSGIN2	HOURS - WILL NOW BE ABLE TO RUN OILBASE MUD OVER SHAKERS BEFORE GOING TO MUD TANKS - SEAL GATES ON MUD TANKS FOR OIL BASE MUD - THE FIRST TESTER AND BOTH DRILLERS DID NOT KNOW WHICH WAY TO RUN TEST PLUG, TESTER GONE, 3 REPLACEMENTS SHOWED UP
8/17/2008	06:00 - 07:30	1.50	BOP	1	DRLPRO	FINISH ALL BOP TESTING
	07:30 - 08:00	0.50	BOP	1	DRLPRO	INSTALL WEAR BUSHING - FINISH GELLING GATES
	08:00 - 09:00	1.00	RIG	1	DRLPRO	SERVICE RIG AND TOP DRIVE - START FILLING MUD TANKS WITH OILBASE MUD OVER SHAKER SCREEN
	09:00 - 10:30	1.50	CSG	1	DRLPRO	HOLD SAFETY MEETING AND RIG UP LD CREW
	10:30 - 11:00	0.50	TRP	1	DRLPRO	PICK UP BIT AND MM AND DRY TURN WITH ROTARY TABLE
	11:00 - 16:00	5.00	TRP	1	DRLPRO	START PICKING UP BHA AND DRILL PIPE
	16:00 - 17:30	1.50	RIG	2	DRLPRO	REPAIR OIL LEAK ON TOP DRIVE
	17:30 - 18:00	0.50	TRP	1	DRLPRO	PICK UP DRILL PIPE
	18:00 - 23:30	5.50	TRP	1	DRLPRO	PICK UP DRILL PIPE
	23:30 - 00:00	0.50	CSG	1	DRLPRO	RIG DOWN LD MACHINE
8/18/2008	00:00 - 00:30	0.50	BOP	1	DRLPRO	INSTALL RT HEAD
	00:30 - 03:00	2.50	DRL	4	DRLPRO	TAGGED LIGHT CEMENT AT 11865 - DISPLACE WATER BASE MUD WITH OIL BASE MUD WHILE SAFETY WASH AND REAM TO SHOE WHICH CAME IN 4' EARLY DUE TO CASING MAKE UP
	03:00 - 04:00	1.00	BOP	1	DRLPRO	USED RT. RUBBER ELEMENT LEAKING - CHANGE RT. HEAD UNITS
	04:00 - 05:00	1.00	DRL	4	DRLPRO	FINISH DRILLING OUT SHOE TRACK
	05:00 - 05:30	0.50	EQT	2	DRLPRO	FIT - 15.5 EQUIVLENT - OK
	05:30 - 06:00	0.50	RIG	2	DRLPRO	RIG REPAIR - BROKEN FUEL HOSE TO TOP DRIVE
	06:00 - 07:30	1.50	RIG	2	DRLPRO	REPAIR AND REPLACE RETURN FUEL LINE ON TOP DRIVE
	07:30 - 14:00	6.50	DRL	1	DRLPRO	DRILL FROM 12042 TO 12212
	14:00 - 15:00	1.00	RIG	1	DRLPRO	SERVICE RIG AND TOP DRIVE
	15:00 - 16:00	1.00	CIRC	1	DRLPRO	CIRCULATE OUT GAS FROM ABERDEEN - 45 BBL GAIN WITH 60' FLARE
8/19/2008	16:00 - 18:00	2.00	DRL	1	DRLPRO	DRILL FROM 12212 TO 12265
	18:00 - 23:30	5.50	DRL	1	DRLPRO	DRILL FROM 12265 TO 12375
	23:30 - 00:30	1.00	CIRC	1	DRLPRO	SLOW PUMP RATES AND CONNECTIONS FOR BOTH CREWS
	00:30 - 06:00	5.50	DRL	1	DRLPRO	DRILL FROM 12375 TO 12545 - CONNECTIONS CREATE 60' FLARES - LEAVING MUD WT ALONE - WILL BUILD 160 BBLS VOLUME TODAY - ABERDEEN HAD 45 BBL GAIN WITH 65' FLARE - THE MUD WE GOT FROM SST 66 WE HAVE KNOCKED LOW GRAVITYS FROM 8.4 TO 4.0 - NEED TO GET SUPER SUCKERS TO CLEAN EMPTY OIL BASE TANKS AS MUD HAD EXTRA MATERIAL THAT WE CAN NOT USE. LOST 85 BBLS CLEANING UP THERE MUD, WILL REBILL THEM ON MATERIAL TRANSFER
	06:00 - 14:30	8.50	DRL	1	DRLPRO	DRILL FROM 12545 TO 12794
	14:30 - 15:30	1.00	RIG	1	DRLPRO	SERVICE RIG AND TOP DRIVE
	15:30 - 18:00	2.50	DRL	1	DRLPRO	DRILL FROM 12794 TO 12870
	18:00 - 01:00	7.00	DRL	1	DRLPRO	DRILL FROM 12870 TO 13085
	01:00 - 02:00	1.00	CIRC	1	DRLPRO	SPR AND CONNECTIONS FOR BOTH CREWS
	02:00 - 06:00	4.00	DRL	1	DRLPRO	DRILL FROM 13085 TO 13215 - MUD WT. A COUPLE TENTHS HIGH BUT GIVES ME A SAFETY CUSHION WITH MY DRILLERS - SHOULD BE ABLE TO HOLD ALL THRU MANCOS B - BUILT 200 BBLS OF SPARE OIL BASE MUD - WILL CLEAN OIL BASE TANKS THIS AM
8/20/2008	06:00 - 13:00	7.00	DRL	1	DRLPRO	DRILL FROM 13215 TO 13448
	13:00 - 13:30	0.50	OTH		DRLPRO	WORK ON PASON AUTO DRILLER UNIT

Operations Summary Report

Legal Well Name: WV 15D-23-8-21

Common Well Name: WV 15D-23-8-21

Event Name: DRILLING

Contractor Name: Unit Drilling Co.

Rig Name: UNIT

Start: 6/9/2008

Rig Release:

Rig Number: 109

Spud Date: 6/9/2008

End:

Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
8/20/2008	13:30 - 14:30	1.00	DRL	1	DRLPRO	DRILL FROM 13448 TO 13473
	14:30 - 15:30	1.00	RIG	1	DRLPRO	SERVICE RIG AND TOP DRIVE
	15:30 - 18:00	2.50	DRL	1	DRLPRO	DRILL FROM 13473 TO 13538
	18:00 - 19:30	1.50	DRL	1	DRLPRO	DRILL FROM 13538 TO 13570
	19:30 - 20:00	0.50	CIRC	1	DRLPRO	CIRCULATE OUT GAS - 55' FLARE W/ 29 BBL GAIN
	20:00 - 00:30	4.50	DRL	1	DRLPRO	DRILL FROM 13570 TO 13667
	00:30 - 01:30	1.00	CIRC	1	DRLPRO	SPR AND CONNECTIONS
	01:30 - 06:00	4.50	DRL	1	DRLPRO	DRILL FROM 13667 TO 13790 - CONNECTIONS = 4000 UNITS WITH 35' FLARE, 9 BBL GAINS - BACKGROUND = 3000 UNITS WITH 3-5' FLARE - TRYING TO HOLD 14.8 MUD WT. TO WEAR OUT SANDS AND HOLD FOR TD. - CLEANED OUT OIL BASE TANKS WITH SUPER SUCKERS,
8/21/2008	06:00 - 09:00	3.00	DRL	1	DRLPRO	DRILL FROM 13790 TO 13861
	09:00 - 10:00	1.00	RIG	1	DRLPRO	SERVICE RIG AND TOP DRIVE
	10:00 - 18:00	8.00	DRL	1	DRLPRO	DRILL FROM 13861 TO 14050
	18:00 - 00:00	6.00	DRL	1	DRLPRO	DRILL FROM 14050 TO 14159
	00:00 - 01:00	1.00	CIRC	1	DRLPRO	SPR AND CONNECTIONS FOR BOTH CREWS
	01:00 - 02:00	1.00	CIRC	1	DRLPRO	TRY TO WORK TOOL JOINT THRU RT. HEAD AND TRY TO GET BIT TO DRILL - NO LUCK
	02:00 - 03:30	1.50	CIRC	1	DRLPRO	CIRCULATE HOLE CLEAN WHILE BUILDING ECD PILL AND TRIP SLUG
	03:30 - 04:00	0.50	CIRC	1	DRLPRO	SPOT ECD AND TRIP SLUG FOR TRIP OUT
8/22/2008	04:00 - 06:00	2.00	TRP	12	DRLPRO	TRIP OUT FOR MM AND BIT - WILL DO WIRELINE FOR CEMENT ON THIS TRIP OUT
	06:00 - 06:30	0.50	TRP	12	DRLPRO	TRIP OUT
	06:30 - 07:00	0.50	BOP	1	DRLPRO	PULL RT HEAD
	07:00 - 11:00	4.00	TRP	12	DRLPRO	FINISH TRIP OUT AND LD MM AND BIT
	11:00 - 11:30	0.50	OTH		DRLPRO	CLEAN FLOOR
	11:30 - 12:30	1.00	LOG	2	DRLPRO	HOLD SAFETY MEETING AND RIG UP LOGGERS FOR CBL
	12:30 - 15:30	3.00	LOG	2	DRLPRO	LOG HOLE
	15:30 - 16:30	1.00	LOG	2	DRLPRO	RIG LOGGERS DOWN
	16:30 - 17:30	1.00	RIG	1	DRLPRO	SERVICE RIG AND TOP DRIVE
	17:30 - 18:00	0.50	CIRC	1	DRLPRO	SURFACE TEST MM - OK
	18:00 - 21:00	3.00	TRP	2	DRLPRO	TRIP IN TO HOLE FILLING EVERY 2500' AND CIRCULATING FOR 10 MIN. TO 9000'
	21:00 - 21:30	0.50	BOP	1	DRLPRO	INSTALL RT. HEAD
	21:30 - 22:00	0.50	CIRC	1	DRLPRO	CIRCULATE 1400 STROKES
	22:00 - 23:00	1.00	TRP	2	DRLPRO	TRIP TO SHOE
	23:00 - 00:30	1.50	RIG	6	DRLPRO	CUT DRILL LINE
	00:30 - 02:00	1.50	TRP	2	DRLPRO	TRIP TO 95' FROM BOTTOM
	02:00 - 02:30	0.50	REAM	1	DRLPRO	SAFETY WASH AND REAM TO BOTTOM - NO FILL
	02:30 - 04:00	1.50	CIRC	1	DRLPRO	TAG BOTTOM AND CIRCULATE OUT GAS - 75' FLARE ON CHOKE - 210 PSI ON CASING
8/23/2008	04:00 - 06:00	2.00	DRL	1	DRLPRO	DRILL FROM 14159 TO 14249 - THIS MOTOR MUCH STRONGER
	06:00 - 11:00	5.00	DRL	1	DRLPRO	DRILL F/ 14249'-14442', WOB- 6/8K, RPM- 145 COMBINED, GPM- 214, MW- 14.8, VIS- 42, BG GAS- 850u THRU BUSTER, CONN GAS- 2750u WITH 25' FLARE, NO LOSSES
	11:00 - 12:00	1.00	RIG	1	DRLPRO	LUBRICATE RIG & TOP DRIVE, FUNCTION ANNULAR & COM
	12:00 - 06:00	18.00	DRL	1	DRLPRO	DRILL F/ 14442'-15200', WOB- 6/10K, RPM- 145 COMBINED, GPM- 214, MW- 14.7+, VIS- 41, BG GAS- 870u, CONN GAS- 3120u WITH 30' FLARE, NO LOSSES
8/24/2008	06:00 - 11:30	5.50	DRL	1	DRLPRO	DRILL F/ 15200'-15412', WOB- 6/10K, RPM- 145 COMBINED, GPM- 214, MW- 14.8, VIS- 41, BG GAS- 450U, CONN GAS- 1400u WITH 20'

Operations Summary Report

Legal Well Name: WV 15D-23-8-21

Common Well Name: WV 15D-23-8-21

Event Name: DRILLING

Contractor Name: Unit Drilling Co.

Rig Name: UNIT

Spud Date: 6/9/2008

Start: 6/9/2008

End:

Rig Release:

Group:

Rig Number: 109

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
8/24/2008	06:00 - 11:30	5.50	DRL	1	DRLPRO	FLARE, NO LOSSES
	11:30 - 12:30	1.00	RIG	1	DRLPRO	LUBRICATE RIG & TOP DRIVE, FUNCTION HCR & COM
	12:30 - 17:30	5.00	DRL	1	DRLPRO	DRILL F/ 15412'-15605' DRLG WITH SAME PARAMETERS MW & VIS, NO LOSSES
	17:30 - 18:30	1.00	CIRC	1	DRLPRO	CIRC. OUT GAS KICK @ 15605'- 30 BBL GAIN WITH 35' FLARE
	18:30 - 06:00	11.50	DRL	1	DRLPRO	DRILL F/ 15605'-16060', WOB- 8/10K, RPM- 145 COMBINED, GPM- 214, MW- 14.8, VIS- 42, BG GAS- 600u, CONN GAS- 1660u WITH 15' FLARE, NO LOSSES
8/25/2008	06:00 - 06:30	0.50	DRL	1	DRLPRO	DRILL F/ 16060'-16065', WOB- 4/10K, RPM- 120-145 COMBINED, GPM- 195-214, MW- 14.8, VIS- 42, BG GAS- 450u. MUD MOTOR GETTING WEAK, PRESSURED UP & STALLED 3 TIMES
	06:30 - 08:00	1.50	CIRC	1	DRLPRO	CIRC & BUILD ECD PILL & TRIP SLUG
	08:00 - 09:00	1.00	SUR	1	DRLPRO	DROP SURVEY & CHECK FOR FLOW (FLOWING 1.5 BBL/HR)
	09:00 - 10:00	1.00	CIRC	1	DRLPRO	SPOT 50 BBL (16.3 PPG) ECD PILL ON BOTTOM & PUMP TRIP SLUG
	10:00 - 12:00	2.00	TRP	12	DRLPRO	TRIP OUT TO 12406'
	12:00 - 13:30	1.50	CIRC	1	DRLPRO	CIRC. BOTTOMS UP, SPOT 120 BBL (16.3 PPG) ECD PILL & PUMP TRIP SLUG
	13:30 - 14:00	0.50	TRP	12	DRLPRO	PULL ROT. HEAD ELEMENT
	14:00 - 18:00	4.00	TRP	12	DRLPRO	TRIP OUT F/ MUD MOTOR FAILURE & BIT
	18:00 - 19:00	1.00	RIG	1	DRLPRO	LUBRICATE RIG & TOP DRIVE
	19:00 - 00:30	5.50	RIG	2	DRLPRO	TOP DRIVE REPAIR- REPLACE CONTROL MODULE FOR LINK TILT
8/26/2008	00:30 - 02:00	1.50	TRP	12	DRLPRO	TRIP OUT BHA, HOLE FILL 22 BBLs OVER CALCULATED
	02:00 - 03:00	1.00	TRP	12	DRLPRO	BREAK BIT & CHANGE OUT MUD MOTORS, FUNCTIONED BLIND RAMS
	03:00 - 03:30	0.50	TRP	12	DRLPRO	SURFACE TEST MUD MOTOR
	03:30 - 06:00	2.50	TRP	12	DRLPRO	TRIP IN, BREAK CIRC. AFTER BHA, THEN EVERY 3000'
	06:00 - 08:30	2.50	TRP	12	DRLPRO	TRIP IN TO CSG SHOE @ 12050'
	08:30 - 10:00	1.50	CIRC	1	DRLPRO	CIRC. OUT ECD PILL & GAS
	10:00 - 11:30	1.50	TRP	12	DRLPRO	TRIP IN TO 15700'
	11:30 - 18:30	7.00	REAM	1	DRLPRO	REAM F/ 15700'-16065'
	18:30 - 20:00	1.50	DRL	1	DRLPRO	ATTEMPT TO DRILL, UNABLE TO GET ANY DIFFERENTIAL PRESSURE OR REACTIVE TORQUE, SUSPECT BROKEN DRIVE SHAFT IN MUD MOTOR
	20:00 - 21:30	1.50	CIRC	1	DRLPRO	CIRC. BOTTOMS UP & MIX ECD PILL & TRIP SLUG
8/27/2008	21:30 - 03:30	6.00	REAM	1	DRLPRO	BACK REAM OUT OF HOLE F/ 16065'-14540'
	03:30 - 05:00	1.50	CIRC	1	DRLPRO	CIRC. BOTTOMS UP
	05:00 - 06:00	1.00	CIRC	1	DRLPRO	SPOT 60 BBL ECD PILL @ 16.3 PPG
	06:00 - 07:30	1.50	TRP	12	DRLPRO	TRIP OUT USING PIPE SPINNERS TO 12030' (MUD MOTOR FAILURE)
	07:30 - 09:00	1.50	CIRC	1	DRLPRO	CIRC. BOTTOMS UP & SPOT 100 BBL ECD PILL @ 16.3 PPG
	09:00 - 09:30	0.50	TRP	12	DRLPRO	PULL ROT. HEAD ELEMENT
	09:30 - 16:30	7.00	TRP	12	DRLPRO	TRIP OUT USING PIPE SPINNERS F/ MUD MOTOR FAILURE
	16:30 - 17:00	0.50	TRP	1	DRLPRO	BREAK BIT & LAY DOWN MUD MOTOR (FOUND STATOR RUBBER IN BIT)
	17:00 - 18:00	1.00	RIG	1	DRLPRO	LUBRICATE RIG & TOP DRIVE, FUNCTIONED BLIND RAMS & CLEAN RIG FLOOR
	18:00 - 19:00	1.00	TRP	1	DRLPRO	MAKE UP & SURFACE TEST TORQUE BUSTER
	19:00 - 23:00	4.00	TRP	12	DRLPRO	TRIP IN TO CSG SHOE @ 12020', BREAK CIRC. EVERY 3000'
	23:00 - 23:30	0.50	TRP	12	DRLPRO	INSTALL ROT. HEAD ELEMENT
	23:30 - 00:30	1.00	RIG	6	DRLPRO	CUT DRLG LINE & RESET COM
	00:30 - 02:00	1.50	CIRC	1	DRLPRO	CIRC OUT ECD PILL & GAS
	02:00 - 04:30	2.50	TRP	12	DRLPRO	TRIP IN TO 15970'

Operations Summary Report

Legal Well Name: WV 15D-23-8-21
 Common Well Name: WV 15D-23-8-21
 Event Name: DRILLING
 Contractor Name: Unit Drilling Co.
 Rig Name: UNIT

Start: 6/9/2008
 Rig Release:
 Rig Number: 109
 Spud Date: 6/9/2008
 End:
 Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
8/27/2008	04:30 - 05:00	0.50	REAM	1	DRLPRO	WASH 90' TO BOTTOM WITH NO FILL
	05:00 - 06:00	1.00	DRL	1	DRLPRO	DRILL F/ 16065'-16075', WOB- 8/12K, RPM- 65, GPM- 214, MW- 15, VIS- 44, BG GAS- 20u
8/28/2008	06:00 - 19:00	13.00	DRL	1	DRLPRO	DRILL F/ 16075'-16190' , WOB- 8/14K, RPM- 55/70, GPM- 214, MW- 15, VIS- 41, BG GAS-360u, CONN GAS- 2900u WITH 30' FLARE, NO LOSSES
	19:00 - 20:00	1.00	RIG	1	DRLPRO	LUBRICATE RIG & TOP DRIVE, FUNCTION HCR & COM
8/29/2008	20:00 - 02:30	6.50	DRL	1	DRLPRO	DRILL F/ 16190'-16220', WOB- 12/18K, RPM- 55/65, GPM- 214, MW- 15, VIS- 41, BG GAS- 650u, CONN GAS- 2560u WITH 30' FLARE, NO LOSSES
	02:30 - 03:30	1.00	CIRC	1	DRLPRO	CIRC., MIX TRIP SLUG & FILL TRIP TANK
	03:30 - 04:30	1.00	CIRC	1	DRLPRO	SPOT 60 BBL ECD PILL, 1.5 PPG OVER & PUMP TRIP SLUG
	04:30 - 06:00	1.50	TRP	10	DRLPRO	TRIP OUT F/ BIT
	06:00 - 06:30	0.50	TRP	10	DRLPRO	TRIP OUT TO 12500'
	06:30 - 08:00	1.50	CIRC	1	DRLPRO	CIRC BOTTOMS UP & SPOT 120 BBL ECD PILL 1.5 PPG OVER
	08:00 - 08:30	0.50	TRP	10	DRLPRO	PULL ROT. HEAD ELEMENT
	08:30 - 14:00	5.50	TRP	10	DRLPRO	TRIP OUT, HOLE FILL 19 BBL OVER CALCULATED
	14:00 - 14:30	0.50	TRP	1	DRLPRO	BREAK BIT & LAY DOWN TORQUE BUSTER, FUNCTIONED BLIND RAMS
	14:30 - 15:00	0.50	TRP	1	DRLPRO	PICK UP & SURFACE TEST MUD MOTOR
	15:00 - 16:00	1.00	TRP	10	DRLPRO	TRIP IN BHA & CHANGE OUT JARS
	16:00 - 20:00	4.00	TRP	10	DRLPRO	TRIP IN TO 12000', BREAK CIRC. EVERY 3000'
	20:00 - 20:30	0.50	TRP	10	DRLPRO	INSTALL ROT. HEAD ELEMENT
	20:30 - 21:30	1.00	RIG	1	DRLPRO	LUBRICATE RIG & TOP DRIVE
	21:30 - 22:30	1.00	CIRC	1	DRLPRO	CIRC. OUT ECD PILL & GAS
	22:30 - 00:30	2.00	TRP	10	DRLPRO	TRIP IN TO 16100'
	00:30 - 01:30	1.00	REAM	1	DRLPRO	WASH 120' TO BOTTOM & PATTERN BIT (NO FILL)
	01:30 - 06:00	4.50	DRL	1	DRLPRO	DRILL F/ 16220'-16240', WOB- 3/5, RPM- 504 COMBINED, GPM- 205, MW- 15.1, VIS- 44, BG GAS- 260u, TRIP GAS- 2700u WITH 40' FLARE, NO LOSSES
8/30/2008	06:00 - 08:00	2.00	DRL	1	DRLPRO	DRILL F/ 16240'-16248', WOB- 3/5K, RPM- 500 COMBINED, GPM- 205, MW- 15.1, VIS- 43, BG GAS- 120u, NO LOSSES
	08:00 - 14:00	6.00	RIG	2	DRLPRO	RIG REPAIR- #2 & 3 GENERATORS WENT DOWN, WAIT ON ELECTRICIAN & MECHANIC. FOUND BROKEN WIRES FOR TEMP. SENSOR ON #3 MOTOR. FOUND LOOSE WIRING IN #2 GENERATOR BAY
	14:00 - 14:30	0.50	DRL	1	DRLPRO	DRILL F/ 16248'-16252', DRLG WITH SAME PARAMETERS
	14:30 - 15:30	1.00	RIG	2	DRLPRO	#2 GENERATOR WENT DOWN AGAIN. UNDER VOLTAGE RELEASE CARD ON MAIN BREAKER IS BAD. ELECTRICIAN IS TRYING TO LOCATE A CARD. WILL DRILL WITH 2 GENERATORS.
	15:30 - 00:00	8.50	DRL	1	DRLPRO	DRILL F/ 16252'-16282', WOB- 3/7K, RPM- 504 COMBINED, GPM- 205, MW- 15, VIS-42, BG GAS- 420u, NO LOSSES
	00:00 - 01:00	1.00	RIG	1	DRLPRO	LUBRICATE RIG & TOP DRIVE, FUNCTION TOP PIPE RAMS & COM
8/31/2008	01:00 - 06:00	5.00	DRL	1	DRLPRO	DRILL F/ 16282'-16298', WOB- 4/7K, RPM- 520 COMBINED, GPM- 214, MW- 15, VIS- 42, BG GAS- 250u, CONN GAS- 1950u WITH 30' FLARE, NO LOSSES
	06:00 - 04:00	22.00	DRL	1	DRLPRO	DRILL F/ 16298'-16383', WOB- 1/6K, RPM- 520 COMBINED, GPM- 214, MW- 15, VIS- 41, BG GAS- 380u, CONN GAS- 1920u WITH 20' FLARE, NO LOSSES
	04:00 - 05:00	1.00	RIG	1	DRLPRO	LUBRICATE RIG & TOP DRIVE, FUNCTION LOWER PIPE RAMS & COM
	05:00 - 06:00	1.00	DRL	1	DRLPRO	RESTART BIT 5 TMES DUE TO STALLS LAST 24 HRS (BIT STUCK @ 16357', PULLED 30K OVER TO FREE BIT.)

Operations Summary Report

Legal Well Name: WV 15D-23-8-21

Common Well Name: WV 15D-23-8-21

Event Name: DRILLING

Contractor Name: Unit Drilling Co.

Rig Name: UNIT

Start: 6/9/2008

Rig Release:

Rig Number: 109

Spud Date: 6/9/2008

End:

Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
9/1/2008	06:00 - 12:00	6.00	DRL	1	DRLPRO	DRILL F/ 16383'-16398' (TD) WOB- 4/6K, RPM- 520 COMBINED, GPM- 214, MW- 15, VIS- 42, BG GAS- 380u, SEEPING 3 BBLs/HR
	12:00 - 13:30	1.50	CIRC	5	DRLPRO	CIRC. BOTTOMS UP SAMPLE
	13:30 - 14:30	1.00	TRP	14	DRLPRO	SHORT TRIP 10 STDS
	14:30 - 17:00	2.50	CIRC	1	DRLPRO	CIRC. BOTTOMS UP, SPOT 60 BBL ECD PILL @ 16.5 PPG & PUMP TRIP SLUG
	17:00 - 19:00	2.00	TRP	2	DRLPRO	TRIP OUT 40 STDS
	19:00 - 20:30	1.50	CIRC	1	DRLPRO	CIRC. BOTTOMS UP, SPOT 120 BBL ECD PILL @ 16.5 PPG & PUMP TRIP SLUG
	20:30 - 21:00	0.50	TRP	2	DRLPRO	PULL ROT. HEAD ELEMENT
	21:00 - 00:00	3.00	TRP	2	DRLPRO	TRIP OUT F/ LOGS
	00:00 - 01:00	1.00	CIRC	1	DRLPRO	PIPE CAME WET, DROP BALL & OPEN CIRC. SUB, PUMP 10 BBL TRIP SLUG
	01:00 - 02:30	1.50	TRP	2	DRLPRO	TRIP OUT F/ LOGS, HOLE FILL 22 BBLs OVER CALCULATED
	02:30 - 03:30	1.00	TRP	1	DRLPRO	BREAK BIT, LAY DOWN MUD MOTOR & CIRC. SUB, CLEAN FLOOR, FUNCTIONED BLIND RAMS
	03:30 - 05:00	1.50	LOG	1	DRLPRO	HOLD SAFETY MEETING & RIG UP SCHLUMBERGER LOGGING TOOLS
	05:00 - 06:00	1.00	LOG	1	DRLPRO	LOGGING- 1ST RUN PLATFORM EXPRESS
	06:00 - 19:30	13.50	LOG	1	EVALPR	LOGGING WITH SCHLUMBERGER, 1ST LOG- PLATFORM EXPRESS F/ 16398'-12025', HIT SEVERAL TIGHT SPOTS LOGGING OUT TO 13500', 2ND LOG- OIL BASE MICRO IMAGING F/ 13500'-12025', MONITOR WELL USING TRIP TANK- NO LOSSES OR GAINS.
9/2/2008	19:30 - 20:30	1.00	LOG	1	EVALPR	RIG DOWN LOGGING TOOLS
	20:30 - 01:00	4.50	TRP	15	EVALPR	MAKE UP BIT, BIT SUB & TRIP IN TO CSG SHOE, BREAK CIRC. EVERY 3000'
	01:00 - 01:30	0.50	TRP	15	EVALPR	INSTALL ROT. HEAD ELEMENT
	01:30 - 02:30	1.00	RIG	6	EVALPR	CUT DRLG LINE & RESET COM
9/3/2008	02:30 - 03:30	1.00	RIG	1	EVALPR	LUBRICATE RIG & TOP DRIVE
	03:30 - 05:00	1.50	CIRC	1	EVALPR	TRIP IN 8 STDS & CIRC. OUT ECD PILL @ 12560'
	05:00 - 06:00	1.00	TRP	15	EVALPR	TRIP IN TO 15500'
	06:00 - 06:30	0.50	TRP	15	DRLPRO	TRIP IN TO 16330'
	06:30 - 07:00	0.50	REAM	1	DRLPRO	WASH 68' TO BOTTOM, NO FILL
	07:00 - 10:00	3.00	CIRC	1	DRLPRO	CIRC. & CONDITION MUD, LOWER MW FROM 15.2 TO 15, VIS- 44
	10:00 - 11:30	1.50	CIRC	1	DRLPRO	SPOT 50 BBL ECD PILL 1.5 PPG OVER & PUMP TRIP SLUG
	11:30 - 13:00	1.50	TRP	2	DRLPRO	TRIP OUT 40 STDS
	13:00 - 15:00	2.00	CIRC	1	DRLPRO	CIRC. BOTTOMS UP, SPOT 80 BBL ECD PILL 1.5 PPG OVER & PUMP TRIP SLUG (HELD SAFETY MEETING WITH LAY DOWN CREW & RIGGED UP LAY DOWN MACHINE)
	15:00 - 22:00	7.00	TRP	3	DRLPRO	LAY DOWN DP
	22:00 - 23:30	1.50	TRP	2	DRLPRO	RIG DOWN LAY DOWN POLE & TRIP IN 40 STDS
	23:30 - 03:00	3.50	TRP	3	DRLPRO	RIG UP LAY DOWN POLE & LAY DOWN DP
	03:00 - 03:30	0.50	TRP	1	DRLPRO	PULL ROT. HEAD ELEMENT
	03:30 - 05:00	1.50	TRP	1	DRLPRO	LAY DOWN BHA
	05:00 - 06:00	1.00	TRP	1	DRLPRO	PULL WEAR BUSHING

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Operations Summary Report

Legal Well Name: WV 15D-23-8-21
Common Well Name: WV 15D-23-8-21
Event Name: DRILLING
Contractor Name: Unit Drilling Co.
Rig Name: UNIT

Spud Date: 6/9/2008
Start: 6/9/2008
End: 9/5/2008
Rig Release: 9/5/2008
Group:
Rig Number: 109

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
6/10/2008	06:00 - 10:00	4.00	LOC	2	DRLCON	RIG UP BUCKET RIG-DRILL 26" HOLE 90' DEEP-SET 20" PIPE AND CEMENT SAME- ACTUAL SPUD ON 6/9/08 AT 0700 HRS.
	10:00 - 01:00	15.00	DRL	9	DRLSUR	MOVE IN & RIG UP AIR RIG- DRILL 17 1/2" HOLE F/ 90' TO 570' (32' OF RAT HOLE)- BLOW DOWN HOLE- LAY DOWN PIPE
	01:00 - 03:00	2.00	CSG	2	CSGSUR	RUN 12 JOINTS OF 13 3/8", K-55, 54.5#, STC CASING-LAND CASING @ 538 FEET
	03:00 - 06:00	3.00	CMT	2	CSGSUR	CEMENT 13 3/8" CASING AS PER PROGRAM: PUMP 60 BBLS. CLEAR WATER & 20 BBLS GEL WATER-MIX & PUMP 102.4 BBLS. 15.8PPG LEAD SLURRY-DISPLACE W/ 75.9 BBLS. CLEAR WATER-BUMP PLUG W. 900 PSI-CHECK FLOATS (OK)-FULL RETURNS DURING JOB/ 35 BBLS. CEMENT TO SURFACE
7/6/2008	06:00 - 18:00	12.00	LOC	4	RDMO	RIG DOWN WITH CRANE, SOLIDS CONTROL, HOPPER, BAR HOPPERS, GAS BUSTER AND 50% FLARE LINES, HAUL ALL 5" DP AND BHA, LOWER DERRICK, ELECTRICAL LINES 50% DONE, TRANSFER 800 BBLS OIL BASE TO UP RIGHT
	18:00 - 06:00	12.00	LOC	4	RDMO	RIG DOWN - LD DERRICK - PULL DRAWWPRKS LEADS - LD LIGHTS, WATER LINES, AIR, CLEAN IN SUB
7/7/2008	06:00 - 18:00	12.00	LOC	4	RDMO	SET DERRICK ON GROUND, LAY RIG LINER OUT ON NEW LOCATION, 80% OF BACKEND MOVED OUT, DRAWWORKS DOWN, RT. TABLE ON WAY TO CASPER FOR REPAIRS, HYDRILL ON WAY TO CASPER FOR REPAIRS, UNSTRING DERRICK, STARTED HARDBANDING TONITE - STEAMERS TO SHOW UP IN MORNINING FOR DERRICK - TRUCK PUSHER TO BE HERE ON MONDAY MORNING
	18:00 - 06:00	12.00	LOC	4	RDMO	WAIT ON DAYLIGHTS
7/8/2008	06:00 - 18:00	12.00	LOC	3	RDMO	STEAM DERRICK OFF, HARDBAND BHA,FINISH RIG SUBS DOWN, SET SUBS, WELD ON WELLHEAD, SET MUDTANKS AND CHOKE HOUSE, SET IN 60% OF BACKEND IN, INSTALL NIGHT CAP, PREPARE OIL BASE FARM FOR MOVE, AT 1800 HYDRILL WAS BEING TESTED AND WILL BE ON LOCATION TUESDAY MORNING AT 0700, NO WORD ON RT. YET,
	18:00 - 06:00	12.00	LOC	3	RDMO	WAIT ON DAYLIGHTS
7/9/2008	06:00 - 18:00	12.00	LOC	3	RDMO	DIG UP BURIED FLARE LINES, INSTALL BOP,FINISH SETTING IN BACK END, SET BUSTER AND LINES TO CHOKE, SET DRAWWORKS, SOLIDS CONTROL,BOTH DOG HOUSES AND WIND WALLS, FLOOR PLATES, GRASSHOPPER SET,SUIT CASE SET,OILBASE FARM ISOLATION AREA READY FOR TANKS, DERRICK IN MORNING WITH OILBASE FARM, WELDERS CHANGEING OUT ALL TOP DRIVE TRACK TURN BUCKLE EARS AS THE TWO TOP ONES ARE TORN AND CRACKED-THEY WERE ONLY MADE FROM 3/8 AND THEY ARE NOW 1" - NEW FLARE LINE HOLDERS 60% DONE AND WE FILLED THEM WITH CEMENT TODAY
	18:00 - 06:00	12.00	LOC	3	RDMO	WAIT ON DAYLIGHTS
7/10/2008	06:00 - 18:00	12.00	LOC	3	RDMO	FINISHED SETTING BACKEND IN, FINISHEDSETTING UP MUD FARM, WELDERS FINISHED WORK IN DERRICK AND XRAYED WELDS, FINISHED SETTING IN SOLIDS CONTROL, PUT DERRICK TOGETHER AND SET ON FLOOR, MOVED SHACKS AND SET IN, START MOVING IN 4"PIPE, SET HOPPER IN
	18:00 - 06:00	12.00	LOC	3	RDMO	WAIT ON DAYLIGHTS
7/11/2008	06:00 - 18:00	12.00	LOC	3	RDMO	FINISH MOVING RIG IN AND SETUP, RELEASE TRUCKS AND CRANE, STRING UP, WORK ON NEW FLARE LINE STANDS, FINISH SOLIDS CONTROL, CHANGE OUT KELLY HOSE, START CHANGING
	18:00 - 06:00	12.00	LOC	3	RDMO	

Operations Summary Report

Legal Well Name: WV 15D-23-8-21

Common Well Name: WV 15D-23-8-21

Event Name: DRILLING

Contractor Name: Unit Drilling Co.

Rig Name: UNIT

Start: 6/9/2008

Rig Release: 9/5/2008

Rig Number: 109

Spud Date: 6/9/2008

End: 9/5/2008

Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
7/11/2008	06:00 - 18:00	12.00	LOC	3	RDMO	OUT TOP DRIVE HOSES, START RIG UP, CHANGING VALVES IN MUD TANKS, HAUL 4" DP , HAUL OILBASE TO TANKS - OLD LOCATION 100% CLEARED OFF, CHANGED FLOW LINE LOCATION
7/12/2008	18:00 - 06:00	12.00	LOC	4	RDMO	WAIT ON DAYLIGHTS
	06:00 - 18:00	12.00	LOC	4	MIRU	FINISH CHANGING OUT TOP DRIVE HOSES, RAISE DERRICK, BRIDAL DOWN, CHANGE OIL ON SWIVEL AND INSTALL, RIG UP FLOOR AND GEL GATES, FINISH REPAIRS ON GUN LINE VALVES AND AGITATOR, HANG SERVICE LOOP, WILL BREAK TOUR ON SATURDAY, FINISHED FLARE LINES, PREPARE OILBASE FARM FOR CIRCULATING, PUT YELLOW DOG ONLINE TO CIRCULATE PIT WITH LIME, WILL FILL MUD AND DAYTANKS IN MORNING.
7/13/2008	06:00 - 18:00	12.00	LOC	4	MIRU	FINISH PUTTING TORQUE TUBE TOGETHER AND HANG, RIG UP HIGH PRESSURE DRESSER SLEEVE ON FLOWLINE, START RIGGING UP TOP DRIVE, FIX LEAKS ON PITS AND CHANGE OUT ONE MORE VALVE, FILL PITS AND DAY TANK, START ON STAND PIPE
	18:00 - 06:00	12.00	LOC	4	MIRU	RIG UP KELLY TO TOP DRIVE AND TORQUE UP ALL JOINTS, MAKE UP REFABRICATED STAND PIPE, CENTER STACK AND HAVE WELDER REFAB FLOW LINE, CHANGE OIL IN TOP DRIVE, PREPARE FOR TESTING BOP'S, WORK ON PUMPS
7/14/2008	06:00 - 08:00	2.00	BOP	1	MIRU	FINISH NIPPLE UP FINLLY, TORQUED UP ALL NUTS
	08:00 - 13:00	5.00	BOP	2	MIRU	TEST BOP'S - 5000 PSI TEST
	13:00 - 18:00	5.00	LOC	4	MIRU	RIG UP BOARD, RIG FLOOR WITH SUBS ECT., INSTALL WEAR BUSHING, PUMP THREW PUMPS AND FLOW LINE, FIX LEAKS, PRESSURE TEST MUD LINES, GET WELDER FOR KELLY HOSE, WAITING FOR PARTS FROM CASPER FOR #2 MOTOR, BLEW INJECTOR THREW VALVE COVER, DAYLIGHTS CREW IS JUST KILLING ME, STAYED QUIT UNTIL 1300 AND BLEW UP, HAVE NOT PUT THEM ON DAYWORK YET, TOO MUCH TODO WITH THIS CREW, ME AND MUD ENGINEER WILL ALSO RACK AND TALLY BHA FOR THEM - FINISHED MUD DOCK LANDING, SHOULD WORK WELL WITH VERY SHORT BACKEND AND TANK FARM SET IN, TAKE KELLY HOSE DOWN, WAIT ON WELDER TO REPAIR LEAK, PUT REPAIRED CATWALK EXTENTION ON, WHILE WAITING ON WELDER THEY ARE CHANGING OIL IN #3 MOTOR SO WE WE CANT PICK UP BHA WITH ONE MOTOR, KELLY COOLED OFF SO WE REINSTALLED, RE-PRESSURE TEST SURFACE LINES, STILL LEAKING, REPAIR BYPASS VALVE ON #1 PUMP, REPAIR BOTH POP-OFF VALVES, REPLACE DISCHARGE SEAT IN #1 PUMP, PARTS SHOWED UP AT 0200 THIS AM FOR #2 MOTOR, MOTOR REPAIRED BY MECHANIC
	18:00 - 03:30	9.50	LOC	4	MIRU	CUT 156' OF BRAND NEW DRILL LINE FROM DRUM, TO MUCH ON DRUM AND STARTED CROSS WRAPPING WHEN RUNNING BLOCKS UP,
	03:30 - 04:30	1.00	RIG	6	MIRU	RIG IS NOW IN PROPER WORKING ORDER AND WILL PUT ON PAY-ROLL AT 0600 THIS MORNING AND WILL GIVE 8 HOURS BACK TO UNIT ON RIG DOWN, START PICKING UP BHA - MUD TANKS HAVE 1400 BBLs AND ALL MUD PRODUCTS ADDED - READY TO ROCK IN ROLL ?
7/15/2008	04:30 - 06:00	1.50	TRP	1	MIRU	PICK UP BHA
	06:00 - 10:00	4.00	TRP	1	DRLIN1	INSTALL RT. HEAD
	10:00 - 10:30	0.50	BOP	1	DRLIN1	RE WRAP DRILL LINE ON DRUM
	10:30 - 11:00	0.50	RIG	2	DRLIN1	CIRCULATE AND CHECK BOTH CHOKES AND BUSTER LINES FOR
	11:00 - 12:00	1.00	EQT	1	DRLIN1	

Operations Summary Report

Legal Well Name: WV 15D-23-8-21

Common Well Name: WV 15D-23-8-21

Event Name: DRILLING

Contractor Name: Unit Drilling Co.

Rig Name: UNIT

Start: 6/9/2008

Rig Release: 9/5/2008

Rig Number: 109

Spud Date: 6/9/2008

End: 9/5/2008

Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
7/15/2008	11:00 - 12:00	1.00	EQT	1	DRLIN1	LEAKS, TEST CASING TO 1500 PSI - OK
	12:00 - 15:30	3.50	DRL	4	DRLIN1	DRILL SHOE TRACK - PLUG, FLOAT COLLAR AND SHOE IN CORRECT SPOT
	15:30 - 16:00	0.50	EQT	2	DRLIN1	FIT = 10.3 - 63# SURFACE W/ 8.4
	16:00 - 16:30	0.50	DRL	1	DRLIN1	DRILL TO KELLY DOWN
	16:30 - 17:00	0.50	CIRC	1	DRLIN1	PUMP TWO SWEEPS FOR TRIP OUT
	17:00 - 18:00	1.00	TRP	2	DRLIN1	TRIP OUT WET TO CHANGE OUT TO HOLE OPENER AND MM
	18:00 - 19:00	1.00	TRP	1	DRLIN1	LD BIT AND FLOAT SUB, PICK UP MM AND HOLEOPENER AND IBS - TORQUE ALL
	19:00 - 19:30	0.50	CIRC	1	DRLIN1	SURFACE TEST MM
	19:30 - 21:30	2.00	TRP	2	DRLIN1	TRIP IN TO HOLE
	21:30 - 06:00	8.50	DRL	1	DRLIN1	DRILL FROM 570 TO 1000'
7/16/2008	06:00 - 16:00	10.00	DRL	1	DRLIN1	DRILL FROM 1000' TO 1410
	16:00 - 16:30	0.50	SUR	1	DRLIN1	SURVEY - DEPTH = 1296 - .3 - 303.8
	16:30 - 17:30	1.00	RIG	1	DRLIN1	SERVICE RIG AND TOP DRIVE
	17:30 - 18:00	0.50	DRL	1	DRLIN1	DRILL FROM 1410 TO 1440
	18:00 - 00:00	6.00	DRL	1	DRLIN1	DRILL FROM 1440 TO 1690
	00:00 - 01:00	1.00	DRL	1	DRLIN1	CONNECTIONS AND SLOW PUMP RATES FOR BOTH CREWS
	01:00 - 06:00	5.00	DRL	1	DRLIN1	DRILL FROM 1690 TO 1975 - NO LOSSES THAT WE CAN TELL - TORQUE GETTING BETTER
	06:00 - 06:30	0.50	RIG	2	DRLIN1	PUMP REPAIR- REPLACE BAD SWAB IN #2 PUMP
	06:30 - 13:30	7.00	DRL	1	DRLIN1	DRILL F/ 1975'-2244', WOB- 10-12K, RPM- 155 COMBINED, GPM- 770, MW- 8.6, VIS- 29, PUMPING 10 BBL HI VIS SWEEPS EVERY 100'
	13:30 - 14:30	1.00	RIG	1	DRLIN1	LUBRICATE RIG & TOP DRIVE, FUNCTION TOP PIPE RAMS & COM
7/17/2008	14:30 - 15:00	0.50	SUR	1	DRLIN1	CIRC & SURVEY, SURVEY DEPTH- 2164, .4 INC, 57.9 AZ
	15:00 - 16:30	1.50	DRL	1	DRLIN1	DRILL F/ 2244'-2308', DRLG WITH SAME PARAMETERS, MW & VIS
	16:30 - 17:30	1.00	RIG	2	DRLIN1	PUMPS AIRED UP DUE TO FOAMED UP MUD, WORK FOAM OUT OF MUD WITH DEFOAMER & REPRIME PUMPS
	17:30 - 19:00	1.50	DRL	1	DRLIN1	DRILL F/ 2308'-2355', DRLG WITH SAME PARAMETERS, MW- 8.6, VIS- 30
	19:00 - 19:30	0.50	RIG	2	DRLIN1	PUMP REPAIR- CHANGE BAD SWAB IN #2 PUMP & REPAIR ROD OILER LINE
	19:30 - 20:30	1.00	DRL	1	DRLIN1	DRILL F/ 2355'-2372', WOB- 12-14K, RPM- 155 COMBINED, GPM- 771, MW- 8.6, VIS- 30
	20:30 - 21:00	0.50	RIG	2	DRLIN1	PUMP REPAIR- CHANGE BAD SWAB IN #1 PUMP & UNPLUG ROD OILER LINE
	21:00 - 05:00	8.00	DRL	1	DRLIN1	DRILL F/ 2372'-2527', WOB- 12-15K, RPM- 155 COMBINED, GPM- 771, MW- 8.6, VIS- 29, PUMPING 10 BBL HI VIS SWEEPS AS NEEDED
	05:00 - 06:00	1.00	CIRC	1	DRLIN1	MIX TRIP SLUG
	06:00 - 06:30	0.50	SUR	1	DRLIN1	DROP SURVEY & PUMP TRIP SLUG
7/18/2008	06:30 - 07:00	0.50	TRP	10	DRLIN1	TRIP OUT TO BHA
	07:00 - 07:30	0.50	TRP	10	DRLIN1	PULL ROT. HEAD ELEMENT
	07:30 - 09:30	2.00	TRP	10	DRLIN1	TRIP OUT BHA, HOLE FILL 24 BBLs OVER CALCULATED, FUNCTIONED BLIND RAMS
	09:30 - 11:00	1.50	TRP	1	DRLIN1	CHANGE OUT BIT, HOLE OPENER & MUD MOTOR
	11:00 - 12:00	1.00	RIG	1	DRLIN1	LUBRICATE RIG & TOP DRIVE, REPLACED 2 BAD VALVES IN SUCTION TANK
	12:00 - 12:30	0.50	TRP	1	DRLIN1	SURFACE TEST MUD MOTOR
	12:30 - 13:30	1.00	TRP	10	DRLIN1	TRIP IN & INSTALL ROT. HEAD ELEMENT
	13:30 - 14:00	0.50	REAM	1	DRLIN1	WASH 65' TO BOTTOM, NO FILL
	14:00 - 02:00	12.00	DRL	1	DRLIN1	DRILL F/ 2527'-2698', WOB- 16-22K, RPM- 170 COMBINED, GPM-

Operations Summary Report

Legal Well Name: WV 15D-23-8-21

Common Well Name: WV 15D-23-8-21

Event Name: DRILLING

Contractor Name: Unit Drilling Co.

Rig Name: UNIT

Start: 6/9/2008

Rig Release: 9/5/2008

Rig Number: 109

Spud Date: 6/9/2008

End: 9/5/2008

Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
7/18/2008	14:00 - 02:00	12.00	DRL	1	DRLIN1	771, MW- 8.7, VIS- 29, PUMPING 10 BBL HI VIS SWEEPS AS NEEDED
	02:00 - 03:00	1.00	RIG	2	DRLIN1	PUMP REPAIR- CHANGE SWAB & REPAIR ROD OILER LINE IN #1PUMP
	03:00 - 06:00	3.00	DRL	1	DRLIN1	DRILL F/ 2698'-2745', WOB- 18-2K, RPM- 170 COMBINED, GPM- 771, MW- 8.7, VIS 28, PUMPING 10 BBL HI VIS SWEEPS AS NEEDED.
7/19/2008	06:00 - 11:30	5.50	DRL	1	DRLIN1	DRILL F/ 2745'-2850', WOB- 18-22K, RPM- 150 COMBINED, GPM- 771, MW- 8.7, VIS- 28, PUMPING HI VIS SWEEPS AS NEEDED, NO TRONA WATER FLOWS
	11:30 - 12:30	1.00	RIG	2	DRLIN1	TOP DRIVE MOTOR OVER HEATED, PULL GAURDS & PRESSURE WASH RADIATOR
	12:30 - 13:30	1.00	RIG	1	DRLIN1	LUBRICATE RIG & TOP DRIVE, FUNCTION LOWER PIPE RAMS & COM
	13:30 - 19:00	5.50	DRL	1	DRLIN1	DRILL F/ 2850'-2962', WOB- 20-23K, RPM- 150 COMBINED, GPM- 771, PUMPING HI VIS SWEEPS AS NEEDED
	19:00 - 19:30	0.50	SUR	1	DRLIN1	DROP SURVEY & PUMP TRIP SLUG
	19:30 - 20:00	0.50	TRP	10	DRLIN1	TRIP OUT F/ BIT & HOLE OPENER
	20:00 - 20:30	0.50	TRP	10	DRLIN1	PULL ROT. HEAD ELEMENT
	20:30 - 22:00	1.50	TRP	10	DRLIN1	TRIP OUT BHA, HOLE FILL 17 BBLS OVER CALCULATED
	22:00 - 23:30	1.50	TRP	1	DRLIN1	BREAK BIT & LAY DOWN MUD MOTOR, PONY DC, IBS & HOLE OPENER, FUNCTION BLIND RAMS
	23:30 - 00:30	1.00	TRP	1	DRLIN1	PICK UP & SURFACE TEST NEW MUD MOTOR
	00:30 - 02:00	1.50	TRP	10	DRLIN1	TRIP IN, FILL PIPE & BREAK CIRC. AFTER BHA
	02:00 - 02:30	0.50	TRP	10	DRLIN1	INSTALL ROT. HEAD ELEMENT
	02:30 - 03:30	1.00	TRP	10	DRLIN1	TRIP IN
	03:30 - 04:00	0.50	REAM	1	DRLIN1	REAM OUT 30' OF 8 3/4" HOLE
	04:00 - 06:00	2.00	DRL	1	DRLIN1	DRILL F/ 2962'-3005', WOB- 8/12K, RPM- 160 COMBINED, GPM- 728, MW- 8.8, VIS- 28, BG GAS- 98u, TRIP GAS- 480u W/ 4' FLARE
7/20/2008	06:00 - 12:30	6.50	DRL	1	DRLIN1	DRILL F/ 3005'-3282', WOB- 14-16K, RPM- 160 COMBINED, GPM- 728, MW- 8.8, VIS- 28, PUMPING 10 BBL HI VIS SWEEPS AS NEEDED, NO TRONA WATER FLOWS.
	12:30 - 13:30	1.00	RIG	1	DRLIN1	LUBRICATE RIG & TOP DRIVE, FUNCTION SUPER CHOKE & COM
	13:30 - 06:00	16.50	DRL	1	DRLIN1	DRILL F/ 3282'-3805, WOB- 16K, RPM- 160 COMBINED, GPM- 728, MW- 8.7, VIS- 28, BG GAS- 1750u, CONN GAS- 3800u W/ 4' FLARE, PUMPING 10 BBL HI VIS SWEEPS AS NEEDED, PICKED UP 1/2" WATER FLOW @ 3650, FLOWING 15 BBLS/HR
7/21/2008	06:00 - 12:00	6.00	DRL	1	DRLIN1	DRILL F/ 3805'-3962', WOB- 16-18K, RPM- 160 COMBINED, GPM- 728, MW- 8.8, VIS- 29, BG GAS- 1950u, CONN GAS- 4500u, NO FLARE, WELL FLOWING FRESH WATER @ 25 BBLS/HR, PUMPING HI VIS SWEEPS AS NEEDED.
	12:00 - 13:00	1.00	RIG	1	DRLIN1	LUBRICATE RIG & TOP DRIVE, FUNCTION TOP PIPE RAMS & COM, CHECK FLOW- FLOWING 28 BBLS/HR
	13:00 - 06:00	17.00	DRL	1	DRLIN1	DRILL F/ 3962'-4374', WOB- 16-18K, RPM- 160 COMBINED, GPM- 728, MW- 8.7, VIS- 28, BG GAS- 2900u, CONN GAS- 5570u, PUMPING HI VIS & BIT BALLING SWEEPS AS NEEDED, FRESH H2O FLOW- 20-30 BBLS/HR
7/22/2008	06:00 - 07:00	1.00	DRL	1	DRLIN1	DRILL F/ 4374'-4395', WOB- 16-18K, RPM- 160 COMBINED, GPM- 728, MW- 8.7, VIS- 29, BG GAS- 2300u, WELL FLOWING 20 BBLS/HR
	07:00 - 08:00	1.00	RIG	2	DRLIN1	REPLACE LINER GASKET IN #2 PUMP
	08:00 - 14:30	6.50	DRL	1	DRLIN1	DRILL F/ 4395'-4581', DRLG WITH SAME PARAMETERS, MW & VIS, WELL FLOWING 17 BBLS/HR
	14:30 - 15:30	1.00	RIG	1	DRLIN1	LUBRICATE RIG & TOP DRIVE, FUNCTION ANNULAR & COM
	15:30 - 06:00	14.50	DRL	1	DRLIN1	DRILL F/ 4581'- 4910', WOB- 16-18K, RPM- 160 COMBINED, GPM-

Operations Summary Report

Legal Well Name: WV 15D-23-8-21

Common Well Name: WV 15D-23-8-21

Event Name: DRILLING

Contractor Name: Unit Drilling Co.

Rig Name: UNIT

Start: 6/9/2008

Rig Release: 9/5/2008

Rig Number: 109

Spud Date: 6/9/2008

End: 9/5/2008

Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
7/22/2008	15:30 - 06:00	14.50	DRL	1	DRLIN1	728, MW- 8.9, VIS- 32, BG GAS- 1260u, CONN GAS- 506Ou, LIGHT MUD UP @ 4600' STOPPED WATER FLOW
7/23/2008	06:00 - 07:30	1.50	DRL	1	DRLIN1	DRILL F/ 4915'-4946', WOB- 16-20K, RPM- 160 COMBINED, GPM- 728, MW- 9, VIS- 32, BG GAS- 950u, NO FLOW WHILE DRLG & NO LOSSES
	07:30 - 08:00	0.50	SUR	1	DRLIN1	DROP SURVEY & PUMP TRIP SLUG, FLOW CHECK- FLOWING 5 BBLS/HR
	08:00 - 09:30	1.50	TRP	10	DRLIN1	TRIP OUT TO BHA
	09:30 - 10:00	0.50	TRP	10	DRLIN1	PULL ROT. HEAD ELEMENT
	10:00 - 12:00	2.00	TRP	10	DRLIN1	TRIP OUT BHA (WET), HOLE FILL 8 BBLS UNDER CALCULATED
	12:00 - 13:00	1.00	TRP	1	DRLIN1	BREAK BIT & RETRIEVE SURVEY TOOL & LAY DOWN MUD MOTOR, FUNCTIONED BLIND RAMS
	13:00 - 14:00	1.00	RIG	1	DRLIN1	LUBRICATE RIG & TOP DRIVE, CLEAN FLOOR
	14:00 - 15:00	1.00	TRP	1	DRLIN1	PICK UP & SURFACE TEST MUD MOTOR
	15:00 - 16:30	1.50	TRP	10	DRLIN1	TRIP IN, FILL PIPE & BREAK CIRC. EVERY 2000'
	16:30 - 17:00	0.50	TRP	10	DRLIN1	INSTALL ROT. HEAD ELEMENT
	17:00 - 17:30	0.50	TRP	10	DRLIN1	FINISH TRIPPING IN
	17:30 - 18:00	0.50	REAM	1	DRLIN1	WASH 85' TO BOTTOM WITH 3' OF FILL
	18:00 - 00:30	6.50	DRL	1	DRLIN1	DRILL F/ 4946'-5175', WOB- 14-18K, RPM 125 COMBINED, GPM- 728, MW- 8.9, VIS- 32, BG GAS- 400u, CONN GAS- 1350u, TRIP GAS- 6470 W/ 5' FLARE, FRESH WATER FLOW- 5 BBLS/HR
	00:30 - 01:30	1.00	CIRC	5	DRLIN1	CIRC. BOTTOMS UP SAMPLE (100% SHALE W/ TRACE OF LIMESTONE)
	01:30 - 02:30	1.00	TRP	14	DRLIN1	SHORT TRIP 10 STDS
	02:30 - 05:30	3.00	CIRC	1	DRLIN1	CIRC. & CONDITION MUD F/ RUNNING CSG
	05:30 - 06:00	0.50	CIRC	1	DRLIN1	FLOW CHECK & PUMP TRIP SLUG, FLOWING 5 BBLS/HR
7/24/2008	06:00 - 09:00	3.00	TRP	2	DRLIN1	TRIP OUT TO RUN 9 5/8" CSG
	09:00 - 10:30	1.50	TRP	1	DRLIN1	LAY DOWN 8" BHA
	10:30 - 11:30	1.00	TRP	2	DRLIN1	PULL WEAR BUSHING
	11:30 - 14:00	2.50	CSG	1	DRLIN1	HOLD SAFETY MEETING & RIG UP ROCKY MTN CSG. CREW MAKE UP FLOAT EQUIPMENT & RUN 9 5/8" CSG, FILL PIPE & BREAK CIRC. EVERY 1200', LOST 62 BBLS RUNNING CSG.
	14:00 - 21:30	7.50	CSG	2	DRLIN1	WASH DOWN LAST 35' & LAND CSG
	21:30 - 22:00	0.50	REAM	1	DRLIN1	CIRC. & CONDITION MUD, RIG DOWN CSG CREW & LAY DOWN MACHINE, GPM- 430
	22:00 - 01:30	3.50	CIRC	1	DRLIN1	LAY DOWN LANDING JT., INSTALL PACK OFF ASSEMBLY & CEMENT ISOLATION TOOL, TEST PACKOFF TO 8000 PSI & VOID TO 5000 PSI
	01:30 - 05:00	3.50	CSG	2	DRLIN1	RIG UP HALLIBURTON LINES
7/25/2008	05:00 - 06:00	1.00	CMT	1	DRLIN1	RIG UP HALLIBURTON CEMENT HEAD & LINES
	06:00 - 08:00	2.00	CMT	1	CSGIN1	CIRC. BOTTOMS UP THRU "A" SECTION WELLHEAD
	08:00 - 10:00	2.00	CIRC	1	CSGIN1	HOLD SAFETY MEETING & PRESSURE TEST CEMENT LINES TO 6000 PSI, N2 LINES TO 8000 PSI
	10:00 - 11:00	1.00	CMT	2	CSGIN1	CEMENT CSG WITH 1435 SX FOAMED CEMENT , 230 SX UNFOAMED TAIL & 200 SX CAP CEMENT. PLUG DID NOT BUMP, FLOATS HELD, RECOVERD 180 BBLS FOAMED CEMENT BACK TO SURFACE
	11:00 - 16:00	5.00	CMT	2	CSGIN1	RIG DOWN CEMENTERS & LAY DOWN CEMENT ISOLATION TOOL
	16:00 - 18:00	2.00	CMT	1	CSGIN1	PRESSURE TEST BOP- 10000 HI, 250 LOW, ANNULAR- 5000, CSG- 1500
	18:00 - 23:30	5.50	BOP	2	CSGIN1	INSTALL WEAR BUSHING
	23:30 - 00:00	0.50	BOP	2	CSGIN1	PICK UP & SURFACE TEST MUD MOTOR
	00:00 - 01:00	1.00	TRP	2	DRLIN2	TRIP IN, FILL PIPE & BREAK CIRC. EVERY 2000'
	01:00 - 03:30	2.50	TRP	2	DRLIN2	

Operations Summary Report

Legal Well Name: WV 15D-23-8-21

Common Well Name: WV 15D-23-8-21

Event Name: DRILLING

Contractor Name: Unit Drilling Co.

Rig Name: UNIT

Start: 6/9/2008

Rig Release: 9/5/2008

Rig Number: 109

Spud Date: 6/9/2008

End: 9/5/2008

Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
7/25/2008	03:30 - 04:00	0.50	TRP	2	DRLIN2	INSTALL ROT. HEAD ELEMENT
	04:00 - 04:30	0.50	TRP	2	DRLIN2	TRIP IN, TAGGED CEMENT @ 4855'
	04:30 - 06:00	1.50	DRL	1	DRLIN2	DRILL CEMENT @ 4950'
7/26/2008	06:00 - 08:30	2.50	DRL	4	DRLIN2	DRILL CEMENT & FLOAT COLLAR F/ 4990'-5130'
	08:30 - 09:30	1.00	RIG	1	DRLIN2	LUBRICATE RIG & TOP DRIVE, FUNCTION COM
	09:30 - 10:00	0.50	DRL	4	DRLIN2	DRILL CEMENT & SHOE F/ 5130'-5175'
	10:00 - 10:30	0.50	DRL	1	DRLIN2	DRILL F/ 5175'-5185', WOB- 16K, RPM- 125 COMBINED, GPM- 425, MW- 9, VIS- 32
	10:30 - 11:30	1.00	EQT	2	DRLIN2	CIRC. & FIT TO 13.5 EQUIVALENT (OK)
	11:30 - 18:30	7.00	DRL	1	DRLIN2	DRILL F/ 5185'-5345', WOB- 22-26K, RPM- 125 COMBINED, GPM- 470, MW- 9, VIS- 31
	18:30 - 19:00	0.50	REAM	1	DRLIN2	WORK THRU TIGHT HOLE F/ 5345'-5310'
	19:00 - 06:00	11.00	DRL	1	DRLIN2	DRILL F/ 5345'-5468', WOB- 24-28K, RPM- 125 COMBINED, GPM- 470, MW- 8.9, VIS- 32, BG GAS- 20u, CONN GAS- 50u, SEEPING 4 BBLS/HR
7/27/2008	06:00 - 14:30	8.50	DRL	1	DRLIN2	DRILL F/ 5468'-5590', WOB- 28-32K, RPM- 120 COMBINED, GPM- 470, MW- 8.9, VIS- 34, SEEPING 4 BBLS/HR
	14:30 - 15:30	1.00	RIG	1	DRLIN2	LUBRICATE RIG & TOP DRIVE, FUNCTION HCR & COM
	15:30 - 16:00	0.50	SUR	1	DRLIN2	DROP SURVEY & PUMP TRIP SLUG
	16:00 - 16:30	0.50	TRP	10	DRLIN2	TRIP OUT 10 STDS
	16:30 - 17:00	0.50	TRP	10	DRLIN2	PULL ROT. HEAD ELEMENT
	17:00 - 17:30	0.50	TRP	10	DRLIN2	TRIP OUT
	17:30 - 18:00	0.50	RIG	2	DRLIN2	REPAIR AIR LINE ON LOW DRUM CLUTCH
	18:00 - 19:00	1.00	TRP	10	DRLIN2	TRIP OUT F/ BIT #5, HOLE FILL 22 BBLS OVER CALCULATED
	19:00 - 19:30	0.50	TRP	1	DRLIN2	BREAK BIT & LAY DOWN MUD MOTOR, FUNCTIONED BLIND RAMS
	19:30 - 20:00	0.50	TRP	1	DRLIN2	PICK UP & SURFACE TEST MUD MOTOR
	20:00 - 21:30	1.50	TRP	10	DRLIN2	TRIP IN TO CSG SHOE, FILL PIPE & BREAK CIRC. EVERY 2000'
	21:30 - 22:00	0.50	TRP	10	DRLIN2	INSTALL ROT. HEAD ELEMENT
	22:00 - 23:30	1.50	RIG	6	DRLIN2	CUT DRLG LINE
	23:30 - 00:00	0.50	REAM	1	DRLIN2	WASH 90' TO BOTTOM
	00:00 - 06:00	6.00	DRL	1	DRLIN2	DRILL F/ 5590'-5745', WOB- 10/12K, RPM- 130 COMBINED, GPM- 385, MW- 8.9, VIS- 34, SEEPING 4 BBLS/HR, BG GAS- 25u, CONN GAS- 40u
7/28/2008	06:00 - 12:00	6.00	DRL	1	DRLIN2	DRILL F/ 5745'-5957', WOB- 12K, RPM- 148 COMBINED, GPM- 450, MW- 9, VIS- 34, BG GAS- 40u, CONN GAS- 100u, SEEPING 2-3 BBLS/HR, PUMPING BIT BALLING SWEEPS AS NEEDED.
	12:00 - 13:00	1.00	RIG	1	DRLIN2	LUBRICATE RIG & TOP DRIVE, FUNCTION ANNULAR & COM
	13:00 - 06:00	17.00	DRL	1	DRLIN2	DRILL F/ 5957'-6573', WOB- 12-14K, RPM- 148 COMBINED, GPM- 470, MW- 9, VIS- 35, BG GAS- 40u, CONN GAS- 100u, SEEPING 2-3 BBLS/HR, PUMPING BIT BALLING SWEEPS AS NEEDED
7/29/2008	06:00 - 15:00	9.00	DRL	1	DRLIN2	DRILL F/ 6573'-6940', WOB- 12-15K, RPM- 160 COMBINED, GPM- 470, MW- 9.1, VIS- 34, BG GAS- 40u, CONN GAS- 80u, SEEPING 2-3 BBLS/HR, PUMPING BIT BALLING SWEEPS AS NEEDED.
	15:00 - 16:00	1.00	RIG	1	DRLIN2	LUBRICATE RIG & TOP DRIVE, FUNCTION TOP PIPE RAMS & COM
	16:00 - 06:00	14.00	DRL	1	DRLIN2	DRILL F/ 6940'-7325', WOB- 14/16K, RPM- 140/160 COMBINED, GPM- 385/470, MW- 9.1, VIS- 34, BG GAS- 45u, CONN GAS- 180u, LOST 80 BBLS @ 7115, PUMPED TWO 30 BBL SWEEPS WITH 10% LCM, CURRENTLY LOSING 6-8 BBLS/HR & PUMPING 10 BBL LCM SWEEPS HOURLY & BIT BALLING SWEEPS AS NEEDED.
7/30/2008	06:00 - 07:00	1.00	DRL	1	DRLIN2	DRILL F/ 7325'-7372', WOB- 14/15K, RPM- 150 COMBINED, GPM- 428, MW- 9.2, VIS- 34, BG GAS- 40, SEEPING 6-8 BBLS/HR, PUMPING 10 BBL LCM SWEEPS HOURLY
	07:00 - 07:30	0.50	RIG	3	DRLIN2	REMOVE SUCTION SCREENS FROM PUMP SUCTIONS

Operations Summary Report

Legal Well Name: WV 15D-23-8-21

Common Well Name: WV 15D-23-8-21

Event Name: DRILLING

Contractor Name: Unit Drilling Co.

Rig Name: UNIT

Start: 6/9/2008

Rig Release: 9/5/2008

Rig Number: 109

Spud Date: 6/9/2008

End: 9/5/2008

Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
7/30/2008	07:30 - 11:30	4.00	DRL	1	DRLIN2	DRILL F/ 7372'-7559', DRLG WITH SAME PARAMETERS, MW & VIS, SEEPING 5-6 BBLS/HR, PUMPING 10 BB LCM SWEEPS HOURLY
	11:30 - 12:30	1.00	RIG	1	DRLIN2	LUBRICATE RIG & TOP DRIVE, FUNCTION BOTTOM PIPE RAMS & COM
	12:30 - 06:00	17.50	DRL	1	DRLIN2	DRILL F/ 7559'-7925', WOB- 14/20K, RPM- 150 COMBINED, GPM- 428, MW- 9.2, VIS- 35, BG GAS- -55u, CONN GAS- 430u, SEEPING 5-6 BBLS/HR, PUMPING BIT BALLING & LCM SWEEPS AS NEEDED
7/31/2008	06:00 - 16:30	10.50	DRL	1	DRLIN2	DRILL FROM 7925 TO 8121
	16:30 - 17:30	1.00	RIG	1	DRLIN2	SERVICE RIG AND TOP DRIVE
	17:30 - 18:00	0.50	DRL	1	DRLIN2	DRILL FROM 8121 TO 8150
	18:00 - 23:30	5.50	DRL	1	DRLIN2	DRILL FROM 8150 TO 8245
	23:30 - 00:30	1.00	DRL	1	DRLIN2	SLOW PUMP RATES AND CONNECTIONS FOR BOTH TOURS
	00:30 - 06:00	5.50	DRL	1	DRLIN2	DRILL FROM 8245 TO 8320 - PUMPING 10 BBL BIT BALLING SWEEPS WHEN NEEDED
8/1/2008	06:00 - 14:30	8.50	DRL	1	DRLIN2	DRILL FROM 8320 TO 8492
	14:30 - 15:30	1.00	RIG	1	DRLIN2	SERVICE RIG AND TOP DRIVE
	15:30 - 18:00	2.50	DRL	1	DRLIN2	DRILL FROM 8492 TO 8579
	18:00 - 23:30	5.50	DRL	1	DRLIN2	DRILL FROM 8579 TO 8676
	23:30 - 00:30	1.00	DRL	1	DRLIN2	SPR AND CONNECTIONS FOR BOTH CREWS
	00:30 - 06:00	5.50	DRL	1	DRLIN2	DRILL FROM 8676 TO 8810 - BG GAS NOW UP TO 300 UNITS
8/2/2008	06:00 - 16:30	10.50	DRL	1	DRLIN2	DRILL FROM 8810 TO 9047
	16:30 - 17:30	1.00	RIG	1	DRLIN2	SERVICE RIG AND TOP DRIVE
	17:30 - 18:00	0.50	DRL	1	DRLIN2	DRILL FROM 9047 TO 9070
	18:00 - 22:30	4.50	DRL	1	DRLIN2	DRILL FROM 9070 TO 9171
	22:30 - 23:30	1.00	DRL	1	DRLIN2	SPR AND CONNECTIONS FOR BOTH TOURS
	23:30 - 06:00	6.50	DRL	1	DRLIN2	DRILL FROM 9171 TO 9310 - VERY AMAZED AS THIS BIT OUT DRILLING NEW BIT FROM OFFSET AT THIS DEPTH
8/3/2008	06:00 - 17:00	11.00	DRL	1	DRLIN2	DRILL FROM 9310 TO 9575
	17:00 - 18:00	1.00	RIG	1	DRLIN2	SERVICE RIG AND TOP DRIVE
	18:00 - 22:30	4.50	DRL	1	DRLIN2	DRILL FROM 9575 TO 9656 - STARTED WT. UP MUD TO 9.4 DUE TO BG GAS, STARTED LOSING MUD AT 30 BBLS PER HOUR, LOST 90 BBLS, LOWERED STROKES AND PUMPED LCM SWEEPS, WE HAVE IT SLOWED DOWN, AT 9650 HAD HIGH TORQUE WITH HIGH PSI SPIKE, SET BACK ON BOTTOM HAD ALL PSI, PREPARE FOR TRIP OUT, NOT WORRIED ON BIT BUT WORRIED ON MM.
	22:30 - 23:30	1.00	CIRC	1	DRLIN2	CIRCULATE BOTTOMS UP FOR SURVEY
	23:30 - 00:00	0.50	SUR	1	DRLIN2	DROP SURVEY
	00:00 - 01:00	1.00	CIRC	1	DRLIN2	CIRCULATE BOTTOMS UP FROM SURVEY TIME WHILE BUILDING PILL AND FILLING TRIP TANK
	01:00 - 01:30	0.50	CIRC	1	DRLIN2	SPOT 120 BBLS OF 18% LCM AND PUMP TRIP SLUG
	01:30 - 03:30	2.00	TRP	10	DRLIN2	TRIP OUT FOR BIT, ONE TIGHT SPOT 3RD STAND FROM BOTTOM, PULLED RIGHT THRU
	03:30 - 04:00	0.50	BOP	1	DRLIN2	PULL RT HEAD
	04:00 - 06:00	2.00	TRP	10	DRLIN2	TRIP TO BHA FOR INSPECTION, WILL CHANGE OUT DRILLING JARS AND MM - BIT
						TRIP BHA OUT AS INSPECTORS ARE LATE - FUNCTION ALL BOP EQUIPMENT AS PER BLM REQUIREMENTS
8/4/2008	06:00 - 08:00	2.00	TRP	10	DRLIN2	HANDLE BHA - CHANGE OUT MM, BIT AND JARS
	08:00 - 09:00	1.00	TRP	1	DRLIN2	SURFACE TEST MM
	09:00 - 09:30	0.50	CIRC	1	DRLIN2	INSPECT DC AND 44 HWDP - ALL OK
	09:30 - 15:00	5.50	ISP	1	DRLIN2	TRIP TO SHOE
	15:00 - 17:00	2.00	TRP	2	DRLIN2	INSTALL RT. HEAD
	17:00 - 17:30	0.50	BOP	1	DRLIN2	CIRCULATE OUT TRIP SLUG AT SHOE
	17:30 - 18:00	0.50	CIRC	1	DRLIN2	

Operations Summary Report

Legal Well Name: WV 15D-23-8-21
 Common Well Name: WV 15D-23-8-21
 Event Name: DRILLING
 Contractor Name: Unit Drilling Co.
 Rig Name: UNIT

Start: 6/9/2008
 Rig Release: 9/5/2008
 Rig Number: 109
 Spud Date: 6/9/2008
 End: 9/5/2008
 Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
8/4/2008	18:00 - 19:00	1.00	TRP	2	DRLIN2	TRIP TO 7700 FEET
	19:00 - 19:30	0.50	CIRC	1	DRLIN2	FILL PIPE AND CIRCULATE MUD UP HOLE FOR 10 MINUTES
	19:30 - 20:30	1.00	TRP	2	DRLIN2	TRIP TO TWO STANDS FROM BOTTOM -
	20:30 - 21:30	1.00	REAM	1	DRLIN2	WASH AND REAM 180' TO BOTTOM - TIGHT SPOT AT 9568
	21:30 - 22:30	1.00	RIG	1	DRLIN2	SERVICE RIG AND TOP DRIVE WHILE CIRCULATING BOTTOMS UP
	22:30 - 06:00	7.50	DRL	1	DRLIN2	DRILL FROM 9656 TO 9941 - HOPEFULLY START SNEAKING UP ON YOU KNOW WHO. STARTED LOSING MUD AT 9915, SWEEPING HOLE WITH 15% LCM AND TREATING HOURLY - NOW LOSING 30 BBLS PER HOUR
8/5/2008	06:00 - 18:00	12.00	DRL	1	DRLIN2	DRILL FROM 9941 TO 10140
	18:00 - 18:30	0.50	DRL	1	DRLIN2	DRILL FROM 10140 TO 10157
	18:30 - 19:30	1.00	DRL	1	DRLIN2	SPR AND CONNECTIONS FOR BOTH CREWS
	19:30 - 04:00	8.50	DRL	1	DRLIN2	DRILL FROM 10157 TO 10345
	04:00 - 05:00	1.00	RIG	1	DRLIN2	SERVICE RIG AND TOP DRIVE
	05:00 - 06:00	1.00	DRL	1	DRLIN2	DRILL FROM 10345 TO 10375 LOSING MUD AT 12 TO 15 BBLS PER HOUR - MUD WT IS NOW 9.85 - HOLE IS VERY SENSITIVE LIKE ME. #1 SHAKER STILL BYPASSED, 1% LCM IN SYSTEM, RUNNING ALL SOLIDS CONTROL, WILL CLEAN SAND TRAP THIS AM AND POSSIBLY SHAKER TANK - WILL START BUILDING REPLACEMENT MUD IN PILL TANK
8/6/2008	06:00 - 10:30	4.50	DRL	1	DRLIN2	DRILL FROM 10375 TO 10468
	10:30 - 11:30	1.00	RIG	1	DRLIN2	SERVICE RIG AND TOP DRIVE
	11:30 - 12:30	1.00	LOC	7	DRLIN2	CLEAN SHALE AND SHAKER TANKS DUE TO HAVING ONE SHAKER BYPASSED
	12:30 - 18:00	5.50	DRL	1	DRLIN2	DRILL FROM 10468 TO 10589
	18:00 - 20:00	2.00	DRL	1	DRLIN2	DRILL FROM 10589 TO 10652
	20:00 - 21:00	1.00	DRL	1	DRLIN2	CHANGE OUT KELLY JOINT - SPR AND CONNECTIONS FOR BOTH CREWS
8/7/2008	21:00 - 06:00	9.00	DRL	1	DRLIN2	DRILL FROM 10652 TO 10850 - NO LOSSES LAST 4.5 HOURS - MUD WT. NOW 9.9 -
	06:00 - 13:00	7.00	DRL	1	DRLIN2	DRILL FROM 10850 TO 10962
	13:00 - 14:00	1.00	DRL	1	DRLIN2	SLOW PUMP RATES AND CONNECTIONS - CHANGE OUT KELLY JOINT
	14:00 - 16:00	2.00	DRL	1	DRLIN2	DRILL FROM 10962 TO 11023
	16:00 - 17:00	1.00	RIG	1	DRLIN2	SERVICE RIG AND TOP DRIVE
	17:00 - 18:00	1.00	DRL	1	DRLIN2	DRILL FROM 11023 TO 11040
8/8/2008	18:00 - 01:30	7.50	DRL	1	DRLIN2	DRILL FROM 11040 TO 11133
	01:30 - 02:30	1.00	SUR	1	DRLIN2	DROP SURVEY - SURVEY DEPTH = 11040 - LAY TWO JOINTS FROM STRING DOWN WHILE WAITING ON SURVEY
	02:30 - 03:30	1.00	CIRC	1	DRLIN2	CIRCULATE BOTTOMS UP FROM SURVEY TIME
	03:30 - 04:00	0.50	CIRC	1	DRLIN2	PUMP 120BBLS OF 1# OVER RCD PILL WITH 15% LCM - TOP OFF WITH TRIP SLUG
	04:00 - 06:00	2.00	TRP	10	DRLIN2	TRIP OUT OF HOLE - AT 0430 WE AT 9500' - SEGO CAME IN AT 11023 - BIT SLOWED IN BUCK TONGUE JUST ABOVE CASTLE GATE
	06:00 - 06:30	0.50	TRP	10	DRLIN2	TRIP TO SHOE
8/8/2008	06:30 - 07:00	0.50	BOP	1	DRLIN2	PULL RT. HEAD
	07:00 - 09:00	2.00	TRP	10	DRLIN2	FINISH TRIP OUT
	09:00 - 10:00	1.00	TRP	1	DRLIN2	CHANGE OUT MM AND BIT
	10:00 - 10:30	0.50	CIRC	1	DRLIN2	SURFACE TESI MM
	10:30 - 12:30	2.00	TRP	2	DRLIN2	TRIP BHA IN AND CIRCULATE FOR FIVE MINUTES, TRIP TO 3500' AND CIRCULATE FOR TEN MINUTES
	12:30 - 13:30	1.00	RIG	1	DRLIN2	SERVICE RIG AND TOP DRIVE, ALSO REPAIR AIR LEAD IN LOW

Operations Summary Report

Legal Well Name: WV 15D-23-8-21
 Common Well Name: WV 15D-23-8-21
 Event Name: DRILLING
 Contractor Name: Unit Drilling Co.
 Rig Name: UNIT

Start: 6/9/2008
 Rig Release: 9/5/2008
 Rig Number: 109
 Spud Date: 6/9/2008
 End: 9/5/2008
 Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
8/8/2008	12:30 - 13:30	1.00	RIG	1	DRLIN2	DRUM CLUTCH
	13:30 - 14:30	1.00	TRP	2	DRLIN2	TRIP TO SHOE
	14:30 - 15:00	0.50	BOP	1	DRLIN2	INSTALL RT. HEAD
	15:00 - 16:30	1.50	RIG	6	DRLIN2	CUT DRILL LINE
	16:30 - 17:00	0.50	CIRC	1	DRLIN2	CIRCULATE BOTTOMS UP AT SHOE
	17:00 - 18:00	1.00	TRP	2	DRLIN2	TRIP INTO HOLE TO 8200 AND CIRCULATE FOR 20 MINUTES
	18:00 - 20:30	2.50	TRP	2	DRLIN2	TRIP TO ONE STAND FROM BOTTOM
	20:30 - 22:00	1.50	REAM	1	DRLIN2	SAFETY WASH AND REAM 81' TO BOTTOM, 2 FEET OF FILL, CIRCULATE OUT GAS
	22:00 - 06:00	8.00	DRL	1	DRLIN2	DRILL FROM 11133 TO 11275 - CASTLEGATE CAME IN AT 11154 - BLACKHAWK SHOULD COME IN AT 11454 LEAVING TD AROUND 12000' - RUSS WILL BE HERE TODAY - MUD WT IS NOW 10.75 AND WILL STAY THERE UNTIL MORE IS NEEDED
8/9/2008	06:00 - 10:30	4.50	DRL	1	DRLIN2	DRILL FROM 11275 TO 11331
	10:30 - 11:00	0.50	DRL	1	DRLIN2	KELLY JOINT - SPR AND CONNECTIONS
	11:00 - 17:00	6.00	DRL	1	DRLIN2	DRILL FROM 11331 TO 11424
	17:00 - 18:00	1.00	RIG	1	DRLIN2	SERVICE RIG AND TOP DRIVE
	18:00 - 02:30	8.50	DRL	1	DRLIN2	DRILL FROM 11484 TO 11518 - AT 11450 TOOK ON WATER FLOW FROM CASTLE GATE (90 BBLs) BIT SLOWED AND TORQUED WITH PSI SPIKE
	02:30 - 03:30	1.00	CIRC	1	DRLIN2	CIRCULATE BOTTOMS UP FOR TRIP
	03:30 - 04:00	0.50	CIRC	1	DRLIN2	SPOT LCM ECD PILL AND TRIP SLUG
	04:00 - 06:00	2.00	TRP	10	DRLIN2	TRIP OUT FOR BIT - STARTED PICKING EXTRA TORQUE AND PSI SPIKE - WE ARE JUST IN TO THE BLACKHAWK EQUIVLENT WHICH CAME IN AT 11480
8/10/2008	06:00 - 06:30	0.50	TRP	10	DRLIN2	TRIP OUT TO SHOE
	06:30 - 07:00	0.50	BOP	1	DRLIN2	PULL RT HEAD
	07:00 - 09:00	2.00	TRP	10	DRLIN2	FINISH TRIP OUT
	09:00 - 10:00	1.00	TRP	1	DRLIN2	DRAIN AND LD MM AND BIT - BIT RING OUT - CLEAN FLOOR - PICK UP SAME
	10:00 - 10:30	0.50	CIRC	1	DRLIN2	SURFACE TEST MM
	10:30 - 13:30	3.00	TRP	2	DRLIN2	TRIP BHA AND DRILL PIPE TO SHOE - FILL AND CIRC. AT BHA - 2500' AND 5200
	13:30 - 14:00	0.50	BOP	1	DRLIN2	CHANGE AND INSTALL RT. HEAD
	14:00 - 14:30	0.50	CAV	1	DRLIN2	CIRCULATE OUT TRIP SLUG AT SHOE
	14:30 - 17:00	2.50	TRP	2	DRLIN2	TRIP IN TO HOLE - BREAK CIRC. AT 8500'
	17:00 - 18:00	1.00	REAM	1	DRLIN2	SAFETY WASH AND REAM 90' TO BOTTOM - STAGE PUMPS UP TO DRILLING GALLONS
8/11/2008	18:00 - 19:00	1.00	RIG	1	DRLIN2	SERVICE RIG AND TOP DRIVE
	19:00 - 06:00	11.00	DRL	1	DRLIN2	DRILL FROM 11518 TO 11775 - BLACKHAWK D GAVE NICE GAS POP WITH 40' FLARE BUT WILL STAY WITH 10.7 MUD WT. KENNELWORTH COMING NEXT AT 11880 WITH OUR NEXT POSSIBLE LOSS ZONE AT 11950 - 8' DRILLING FLARE ON BUSTER
	06:00 - 07:30	1.50	DRL	1	DRLIN2	DRILL FROM 11775 TO 11797
	07:30 - 08:00	0.50	DRL	1	DRLIN2	CHANGE OUT KELLY JOINT AND SLOW PUMP RATES
	08:00 - 12:30	4.50	DRL	1	DRLIN2	DRILL FROM 117978 TO 11858
	12:30 - 13:30	1.00	RIG	1	DRLIN2	SERVICE RIG AND TOP DRIVE
	13:30 - 18:00	4.50	DRL	1	DRLIN2	DRILL FROM 11858 TO 11925
	18:00 - 20:00	2.00	DRL	1	DRLIN2	DRILL FROM 11925 TO 11978 - LOST PARTIAL RETURNS AT 11960, GOT BACK TO FULL WITH SWEEP - KEPT DRILLING AND LOST FULL RETURNS - GO TO SLOW PUMP RATE AND ALL 18 % LCM FROM PREMIX TANK - BYPASS BOTH SHAKERS
	20:00 - 00:30	4.50	CIRC	2	DRLIN2	LOST FULL RETURNS - PUMP 20% LCM DOWN HOLE, REGAIN

Operations Summary Report

Legal Well Name: WV 15D-23-8-21

Common Well Name: WV 15D-23-8-21

Event Name: DRILLING

Contractor Name: Unit Drilling Co.

Rig Name: UNIT

Start: 6/9/2008

Rig Release: 9/5/2008

Rig Number: 109

Spud Date: 6/9/2008

End: 9/5/2008

Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
8/11/2008	20:00 - 00:30	4.50	CIRC	2	DRLIN2	SOME CIRCULATION - BUILD VOLUME - LOST 625 AT FIRST
	00:30 - 04:30	4.00	DRL	1	DRLIN2	DRILL FROM 11978 TO 12042 - LOST ANOTHER 67 BBLS - HOLDING AT PRESENT
8/12/2008	04:30 - 05:30	1.00	CIRC	1	DRLIN2	CIRCULATE BOTTOMS UP FOR SHORT TRIP
	05:30 - 06:00	0.50	TRP	14	DRLIN2	SHORT TRIP 20 STANDS
	06:00 - 07:30	1.50	TRP	14	DRLIN2	SHORT TRIP 15 STANDS OUT AND IN - HOLE OK
	07:30 - 08:00	0.50	SUR	1	DRLIN2	DROP SURVEY
	08:00 - 10:00	2.00	CIRC	1	DRLIN2	CIRCULATE BOTTOMS UP AND SPOT LCM-ECD PILL ALONG WITH TRIP SLUG
	10:00 - 14:00	4.00	TRP	2	DRLIN2	START TRIP OUT FOR LOGS - STRAP OUT
	14:00 - 14:30	0.50	BOP	1	DRLIN2	PULL RT. HEAD
	14:30 - 17:30	3.00	TRP	2	DRLIN2	FINISH TRIP OUT - LAST 3 STANDS WET
	17:30 - 18:00	0.50	TRP	1	DRLIN2	DRAIN MM - LD BIT - PULL SURVEY TOOL
	18:00 - 18:30	0.50	BOP	1	DRLIN2	PULL WEAR BUSHING
8/13/2008	18:30 - 19:30	1.00	LOG	1	DRLIN2	HOLD SAFETY MEETING - RIG UP LOGGING ADAPTER AND LOGGERS
	19:30 - 00:30	5.00	LOG	1	DRLIN2	RUN LOGS IN - LOGS STOPPED AT 7356 - PULL OUT AND ATTEMPT SLICK RUN WITH NO LUCK
	00:30 - 01:00	0.50	LOG	1	DRLIN2	RIG DOWN LOGGERS
	01:00 - 02:00	1.00	RIG	1	DRLIN2	SERVICE RIG AND TOP DRIVE
	02:00 - 02:30	0.50	RIG	8	DRLIN2	CHANGE OUT LOAD CELL ON TORQUE UNIT
	02:30 - 05:00	2.50	TRP	2	DRLIN2	PICK UP BHA AND TRIP TO 3500' - FILL AT 600 - 1700 - AND CIRC.
	05:00 - 05:30	0.50	CIRC	1	DRLIN2	KELLY UP AND CIRC. HOLE
	05:30 - 06:00	0.50	TRP	2	DRLIN2	TRIP IN TO HOLE SLOWLY - NOT OVER 20% FLOW ON WAY IN
	06:00 - 06:30	0.50	BOP	1	DRLIN2	INSTALL RT. HEAD AT SHOE
	06:30 - 07:00	0.50	CIRC	1	DRLIN2	CIRCULATE BOTTOMS UP AT SHOE
8/14/2008	07:00 - 08:30	1.50	TRP	2	DRLIN2	STAGE IN TO HOLE
	08:30 - 09:00	0.50	REAM	1	DRLIN2	SEEN TIGHT SPOT WHERE LOGGERS DID AT 7345 - WENT RIGHT THRU - WORKED A FEW TIMES - OK
	09:00 - 11:30	2.50	TRP	2	DRLIN2	TRIP IN TO HOLE TO
	11:30 - 13:00	1.50	REAM	1	DRLIN2	WASH AND REAM TWO DIFFERANT SPOTS AT 7915 AND 11870 - BOTH VERY SOFT - WASHED AND REAMED THE WHOLE STANDS
	13:00 - 14:30	1.50	CIRC	1	DRLIN2	CIRCULATE TWO BOTTOMS UP AND CONDITION MUD
	14:30 - 15:00	0.50	CIRC	1	DRLIN2	SPOT LCM, ECD AND TRIP SLUG
	15:00 - 18:00	3.00	TRP	2	DRLIN2	TRIP OUT FOR LOGS - NO TIGHT SPOTS YET
	18:00 - 21:00	3.00	TRP	2	DRLIN2	FINISH TRIP OUT
	21:00 - 21:30	0.50	LOG	1	DRLIN2	HOLD SAFETY MEETING AND RIG UP LOGGERS
	21:30 - 06:00	8.50	LOG	1	DRLIN2	LOG OPEN HOLE - FIRST RUN OK - AT 0500 WILL BE ON BOTTOM WITH LAST RUN - TOTAL GAIN IN TRIP TANK IS AT PRESENT WITH WIRE LINE CLOSE TO BOTTOM = 10.10 BBLS - 0500 SECOND RUN TAGGED BOTTOM AND IS NOW 800' FROM BOTTOM LOGGING UP
8/14/2008	06:00 - 08:00	2.00	LOG	1	EVAL 2	FINISH LOGS
	08:00 - 08:30	0.50	LOG	1	EVAL 2	RIG LOGGERS DOWN
	08:30 - 09:30	1.00	RIG	1	EVAL 2	SERVICE RIG AND TOP DRIVE
	09:30 - 12:30	3.00	TRP	2	EVAL 2	TRIP BHA AND PIPE TO SHOE
	12:30 - 13:00	0.50	BOP	1	EVAL 2	INSTALL RT HEAD
	13:00 - 13:30	0.50	CIRC	1	EVAL 2	CIRCULATE BOTTOMS UP
	13:30 - 16:30	3.00	TRP	2	EVAL 2	TRIP TO BOTTOM - FILL AND CIRCULATE EVERY 25 STANDS
	16:30 - 17:00	0.50	REAM	1	EVAL 2	SAFETY WASH AND REAM TO BOTTOM - NO FILL
	17:00 - 18:00	1.00	CIRC	1	EVAL 2	CIRCULATE AND CONDITION MUD FOR LDDP AND RUNNING OF CASING
	18:00 - 19:30	1.50	CIRC	1	EVAL 2	CIRCULATE AND CONDITION MUD - BOTTOMS UP = 3000 UNITS GAS ON BUSTER WITH 36 BBL GAIN AND 35' FLARE

Operations Summary Report

Legal Well Name: WV 15D-23-8-21
 Common Well Name: WV 15D-23-8-21
 Event Name: DRILLING
 Contractor Name: Unit Drilling Co.
 Rig Name: UNIT

Spud Date: 6/9/2008
 End: 9/5/2008
 Start: 6/9/2008
 Rig Release: 9/5/2008
 Group:
 Rig Number: 109

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
8/14/2008	19:30 - 20:00	0.50	CIRC	1	EVAL 2	HOLD SAFETY MEETING WIT LD CREW, PUMP AND SPOT LCM, ECD AND TRIP SLUG
	20:00 - 21:00	1.00	TRP	2	EVAL 2	TRIP FIVE STANDS OUT AND RIG LD CREW
	21:00 - 04:30	7.50	TRP	3	EVAL 2	LDDP
	04:30 - 05:00	0.50	BOP	1	EVAL 2	PULL RT. HEAD
8/15/2008	05:00 - 06:00	1.00	TRP	3	EVAL 2	LDDP AND POSSIBLY START ON BHA - AT 0500 WE ARE AT 2000'
	06:00 - 07:30	1.50	TRP	1	CSGIN2	FINISH LD OF STRING
	07:30 - 08:30	1.00	RIG	7	CSGIN2	CLEAN RIG FLOOR AND HOLD SAFETY MEETING WITH ALL CREWS
	08:30 - 09:30	1.00	CSG	1	CSGIN2	RIG UP CASING CREW
	09:30 - 18:00	8.50	CSG	2	CSGIN2	RUN CASING - CREEP CASING IN TO HOLE - DID NOT HELP - LOST RETURNS TWICE TO 2200' THE WE LOST IT FOR GOOD AT 3300' - BUILD 600 BBLS TO MAKE IT TO BOTTOM - BACKSIDE STAYS FULL BUT LOSE ALL CAP. AND DISP. GOING IN TO HOLE THEN FILL PIPE AND 30 STROKES EXTRA EVERY 700' TO FLOATS OPEN
	18:00 - 21:30	3.50	CSG	2	CSGIN2	FINISH RUNNING CASING - CIRCULATE LAST TWO JOINTS DOWN
	21:30 - 22:00	0.50	CSG	2	CSGIN2	CIRCULATE AND LAND LANDING JOINT - NO RETURNS
	22:00 - 22:30	0.50	CIRC	1	CSGIN2	RIG UP CIRCULATION HOSE FOR PUMPING 25 STROKES EVERY 20 MINUTES SO WE DONT PLUG FLOATS
	22:30 - 23:30	1.00	CSG	1	CSGIN2	RIG DOWN CASING CREW
	23:30 - 03:00	3.50	CMT	1	CSGIN2	PACK OFF WELLHEAD - TEST TO 9000 PSI - SET CEMENT ISOLATION TOOL - FILL STACK AND CLOSE BAG
8/16/2008	03:00 - 03:30	0.50	CMT	1	CSGIN2	RIG UP CEMENTERS AND HOLD SAFETY MEETING
	03:30 - 06:00	2.50	CMT	1	CSGIN2	WAIT ON HALLIBURTON AS N2 TRUCK LOST ALL HYDRAULICS - WAITING ON TRUCK FROM VERNAL OR ROCKSPRINGS - EVERY 20 MIN. WE ARE PUMPING 20 STROKES TO KEEP FLOATS OPEN FROM LCM - COULD BE WAITING ANYWHERE FROM 3 TO 7 HOURS FOR REPLACEMENT TRUCK
	06:00 - 06:30	0.50	CMT	1	CSGIN2	CHANGE OUT SAVER SUB - RESET TOP DRIVE PSI FOR 4" PIPE WHILE WAITING ON HALLIBURTON
	06:30 - 07:00	0.50	CMT	1	CSGIN2	HELD SAFETY MEETING WITH CEMENTERS
	07:00 - 13:00	6.00	CMT	2	CSGIN2	PRESSURE TEST LINE TO 6000 PSI - 50 BBL SPACER AT 5 BPM - 30 BBLS SCAVENGER CEMENT AT 5 BPM - LEAD = 150 BBLS AT 5 BPM - 2ND LEAD = 380 BBLS AT 5 BPM - TAIL = 54 BBLS AT 5 BPM - DROP PLUG - DISPLACE WITH FRESH WATER MUD (10.75) - PSI = 1024 - BUMP PLUG TO 1550 - HOLD FOR 1/2 HOUR - FLOAT HELD - PUMP CAP = 55 BBLS AT 3 BPM - 3 BBLS WATER DISP. - START CAP PSI = 600 - FINISH CAP PSI = 460
	13:00 - 14:00	1.00	CMT	1	CSGIN2	RIG DOWN CEMENTERS
	14:00 - 17:30	3.50	LOC	7	CSGIN2	START CLEANING PITS - START CHANGING OUT KOOMEY REMOTE CORD, OLD ONE HAS ELEVEN SPLICES - CHANGE OUT QUICK RELEASE ON LOW DRUM CLUTCH - CHANGE OUT PONY ROD SEALS ON #2 PUMP - CHANGE OUT PUMP ON HIGH SPEED CENT. - HAVE WELDER REPAIR ADGITATOR BLADES ON #4
	17:30 - 18:00	0.50	BOP	2	CSGIN2	RIG UP TESTER WHILE STILL CLEANING TANKS
	18:00 - 06:00	12.00	BOP	2	CSGIN2	TEST BOP'S - HAVE TRIED 3 DIFFERANT TEST PLUGS AND NONE WILL TEST - STACK IS SPIT CLEAN - TAKE TEST PLUG AND WRAP TEFLON IN SEAL GROOVE, STREACH NEW SEAL OVER PLUG AND SET - NOW HOLDING, CONTINUE WITH TEST - FINISHED CLEANING PITS AT 2200. CHANGE OUT ALL GUN LINE VALVES (12) - SOLIDS CONTROL HOOKED UP, RESERVE PIT WILL BE BLOCKED OF BY 0800, TESTERS DONE BY 0800, WILL INSTALL WEAR BUSHING AND START PICKING UP BHA IN A COUPLE OF

Operations Summary Report

Legal Well Name: WV 15D-23-8-21
 Common Well Name: WV 15D-23-8-21
 Event Name: DRILLING
 Contractor Name: Unit Drilling Co.
 Rig Name: UNIT

Start: 6/9/2008
 Rig Release: 9/5/2008
 Rig Number: 109

Spud Date: 6/9/2008
 End: 9/5/2008
 Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
8/16/2008	18:00 - 06:00	12.00	BOP	2	CSGIN2	HOURS - WILL NOW BE ABLE TO RUN OILBASE MUD OVER SHAKERS BEFORE GOING TO MUD TANKS - SEAL GATES ON MUD TANKS FOR OIL BASE MUD - THE FIRST TESTER AND BOTH DRILLERS DID NOT KNOW WHICH WAY TO RUN TEST PLUG, TESTER GONE, 3 REPLACEMENTS SHOWED UP
8/17/2008	06:00 - 07:30	1.50	BOP	1	DRLPRO	FINISH ALL BOP TESTING
	07:30 - 08:00	0.50	BOP	1	DRLPRO	INSTALL WEAR BUSHING - FINISH GELLING GATES
	08:00 - 09:00	1.00	RIG	1	DRLPRO	SERVICE RIG AND TOP DRIVE - START FILLING MUD TANKS WITH OILBASE MUD OVER SHAKER SCREEN
	09:00 - 10:30	1.50	CSG	1	DRLPRO	HOLD SAFETY MEETING AND RIG UP LD CREW
	10:30 - 11:00	0.50	TRP	1	DRLPRO	PICK UP BIT AND MM AND DRY TURN WITH ROTARY TABLE
	11:00 - 16:00	5.00	TRP	1	DRLPRO	START PICKING UP BHA AND DRILL PIPE
	16:00 - 17:30	1.50	RIG	2	DRLPRO	REPAIR OIL LEAK ON TOP DRIVE
	17:30 - 18:00	0.50	TRP	1	DRLPRO	PICK UP DRILL PIPE
	18:00 - 23:30	5.50	TRP	1	DRLPRO	PICK UP DRILL PIPE
	23:30 - 00:00	0.50	CSG	1	DRLPRO	RIG DOWN LD MACHINE
	00:00 - 00:30	0.50	BOP	1	DRLPRO	INSTALL RT HEAD
	00:30 - 03:00	2.50	DRL	4	DRLPRO	TAGGED LIGHT CEMENT AT 11865 - DISPLACE WATER BASE MUD WITH OIL BASE MUD WHILE SAFETY WASH AND REAM TO SHOE WHICH CAME IN 4' EARLY DUE TO CASING MAKE UP
	03:00 - 04:00	1.00	BOP	1	DRLPRO	USED RT. RUBBER ELEMENT LEAKING - CHANGE RT. HEAD UNITS
	04:00 - 05:00	1.00	DRL	4	DRLPRO	FINISH DRILLING OUT SHOE TRACK
8/18/2008	05:00 - 05:30	0.50	EQT	2	DRLPRO	FIT - 15.5 EQUIVLENT - OK
	05:30 - 06:00	0.50	RIG	2	DRLPRO	RIG REPAIR - BROKEN FUEL HOSE TO TOP DRIVE
	06:00 - 07:30	1.50	RIG	2	DRLPRO	REPAIR AND REPLACE RETURN FUEL LINE ON TOP DRIVE
	07:30 - 14:00	6.50	DRL	1	DRLPRO	DRILL FROM 12042 TO 12212
	14:00 - 15:00	1.00	RIG	1	DRLPRO	SERVICE RIG AND TOP DRIVE
	15:00 - 16:00	1.00	CIRC	1	DRLPRO	CIRCULATE OUT GAS FROM ABERDEEN - 45 BBL GAIN WITH 60' FLARE
	16:00 - 18:00	2.00	DRL	1	DRLPRO	DRILL FROM 12212 TO 12265
	18:00 - 23:30	5.50	DRL	1	DRLPRO	DRILL FROM 12265 TO 12375
	23:30 - 00:30	1.00	CIRC	1	DRLPRO	SLOW PUMP RATES AND CONNECTIONS FOR BOTH CREWS
	00:30 - 06:00	5.50	DRL	1	DRLPRO	DRILL FROM 12375 TO 12545 - CONNECTIONS CREATE 60' FLARES - LEAVING MUD WT ALONE - WILL BUILD 160 BBLs VOLUME TODAY - ABERDEEN HAD 45 BBL GAIN WITH 65' FLARE - THE MUD WE GOT FROM SST 66 WE HAVE KNOCKED LOW GRAVITYS FROM 8.4 TO 4.0 - NEED TO GET SUPER SUCKERS TO CLEAN EMPTY OIL BASE TANKS AS MUD HAD EXTRA MATERIAL THAT WE CAN NOT USE. LOST 85 BBLs CLEANING UP THERE MUD, WILL REBILL THEM ON MATERIAL TRANSFER
8/19/2008	06:00 - 14:30	8.50	DRL	1	DRLPRO	DRILL FROM 12545 TO 12794
	14:30 - 15:30	1.00	RIG	1	DRLPRO	SERVICE RIG AND TOP DRIVE
	15:30 - 18:00	2.50	DRL	1	DRLPRO	DRILL FROM 12794 TO 12870
	18:00 - 01:00	7.00	DRL	1	DRLPRO	DRILL FROM 12870 TO 13085
	01:00 - 02:00	1.00	CIRC	1	DRLPRO	SPR AND CONNECTIONS FOR BOTH CREWS
	02:00 - 06:00	4.00	DRL	1	DRLPRO	DRILL FROM 13085 TO 13215 - MUD WT. A COUPLE TENTHS HIGH BUT GIVES ME A SAFETY CUSHION WITH MY DRILLERS - SHOULD BE ABLE TO HOLD ALL THRU MANCOS B - BUILT 200 BBLs OF SPARE OIL BASE MUD - WILL CLEAN OIL BASE TANKS THIS AM
8/20/2008	06:00 - 13:00	7.00	DRL	1	DRLPRO	DRILL FROM 13215 TO 13448
	13:00 - 13:30	0.50	OTH		DRLPRO	WORK ON PASON AUTO DRILLER UNIT

Operations Summary Report

Legal Well Name: WV 15D-23-8-21

Common Well Name: WV 15D-23-8-21

Event Name: DRILLING

Contractor Name: Unit Drilling Co.

Rig Name: UNIT

Start: 6/9/2008

Rig Release: 9/5/2008

Rig Number: 109

Spud Date: 6/9/2008

End: 9/5/2008

Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
8/20/2008	13:30 - 14:30	1.00	DRL	1	DRLPRO	DRILL FROM 13448 TO 13473
	14:30 - 15:30	1.00	RIG	1	DRLPRO	SERVICE RIG AND TOP DRIVE
	15:30 - 18:00	2.50	DRL	1	DRLPRO	DRILL FROM 13473 TO 13538
	18:00 - 19:30	1.50	DRL	1	DRLPRO	DRILL FROM 13538 TO 13570
	19:30 - 20:00	0.50	CIRC	1	DRLPRO	CIRCULATE OUT GAS - 55' FLARE W/ 29 BBL GAIN
	20:00 - 00:30	4.50	DRL	1	DRLPRO	DRILL FROM 13570 TO 13667
	00:30 - 01:30	1.00	CIRC	1	DRLPRO	SPR AND CONNECTIONS
	01:30 - 06:00	4.50	DRL	1	DRLPRO	DRILL FROM 13667 TO 13790 - CONNECTIONS = 4000 UNITS WITH 35' FLARE, 9 BBL GAINS - BACKGROUND = 3000 UNITS WITH 3-5' FLARE - TRYING TO HOLD 14.8 MUD WT. TO WEAR OUT SANDS AND HOLD FOR TD. - CLEANED OUT OIL BASE TANKS WITH SUPER SUCKERS,
8/21/2008	06:00 - 09:00	3.00	DRL	1	DRLPRO	DRILL FROM 13790 TO 13861
	09:00 - 10:00	1.00	RIG	1	DRLPRO	SERVICE RIG AND TOP DRIVE
	10:00 - 18:00	8.00	DRL	1	DRLPRO	DRILL FROM 13861 TO 14050
	18:00 - 00:00	6.00	DRL	1	DRLPRO	DRILL FROM 14050 TO 14159
	00:00 - 01:00	1.00	CIRC	1	DRLPRO	SPR AND CONNECTIONS FOR BOTH CREWS
	01:00 - 02:00	1.00	CIRC	1	DRLPRO	TRY TO WORK TOOL JOINT THRU RT. HEAD AND TRY TO GET BIT TO DRILL - NO LUCK
	02:00 - 03:30	1.50	CIRC	1	DRLPRO	CIRCULATE HOLE CLEAN WHILE BUILDING ECD PILL AND TRIP SLUG
	03:30 - 04:00	0.50	CIRC	1	DRLPRO	SPOT ECD AND TRIP SLUG FOR TRIP OUT
8/22/2008	04:00 - 06:00	2.00	TRP	12	DRLPRO	TRIP OUT FOR MM AND BIT - WILL DO WIRELINE FOR CEMENT ON THIS TRIP OUT
	06:00 - 06:30	0.50	TRP	12	DRLPRO	TRIP OUT
	06:30 - 07:00	0.50	BOP	1	DRLPRO	PULL RT HEAD
	07:00 - 11:00	4.00	TRP	12	DRLPRO	FINISH TRIP OUT AND LD MM AND BIT
	11:00 - 11:30	0.50	OTH		DRLPRO	CLEAN FLOOR
	11:30 - 12:30	1.00	LOG	2	DRLPRO	HOLD SAFETY MEETING AND RIG UP LOGGERS FOR CBL
	12:30 - 15:30	3.00	LOG	2	DRLPRO	LOG HOLE
	15:30 - 16:30	1.00	LOG	2	DRLPRO	RIG LOGGERS DOWN
	16:30 - 17:30	1.00	RIG	1	DRLPRO	SERVICE RIG AND TOP DRIVE
	17:30 - 18:00	0.50	CIRC	1	DRLPRO	SURFACE TEST MM - OK
	18:00 - 21:00	3.00	TRP	2	DRLPRO	TRIP IN TO HOLE FILLING EVERY 2500' AND CIRCULATING FOR 10 MIN. TO 9000'
	21:00 - 21:30	0.50	BOP	1	DRLPRO	INSTALL RT. HEAD
	21:30 - 22:00	0.50	CIRC	1	DRLPRO	CIRCULATE 1400 STROKES
	22:00 - 23:00	1.00	TRP	2	DRLPRO	TRIP TO SHOE
	23:00 - 00:30	1.50	RIG	6	DRLPRO	CUT DRILL LINE
	00:30 - 02:00	1.50	TRP	2	DRLPRO	TRIP TO 95' FROM BOTTOM
	02:00 - 02:30	0.50	REAM	1	DRLPRO	SAFETY WASH AND REAM TO BOTTOM - NO FILL
	02:30 - 04:00	1.50	CIRC	1	DRLPRO	TAG BOTTOM AND CIRCULATE OUT GAS - 75' FLARE ON CHOKE - 210 PSI ON CASING
	04:00 - 06:00	2.00	DRL	1	DRLPRO	DRILL FROM 14159 TO 14249 - THIS MOTOR MUCH STRONGER
	06:00 - 11:00	5.00	DRL	1	DRLPRO	DRILL F/ 14249'-14442', WOB- 6/8K, RPM- 145 COMBINED, GPM- 214, MW- 14.8, VIS- 42, BG GAS- 850u THRU BUSTER, CONN GAS- 2750u WITH 25' FLARE, NO LOSSES
8/23/2008	11:00 - 12:00	1.00	RIG	1	DRLPRO	LUBRICATE RIG & TOP DRIVE, FUNCTION ANNULAR & COM
	12:00 - 06:00	18.00	DRL	1	DRLPRO	DRILL F/ 14442'-15200', WOB- 6/10K, RPM- 145 COMBINED, GPM- 214, MW- 14.7+, VIS- 41, BG GAS- 870u, CONN GAS- 3120u WITH 30' FLARE, NO LOSSES
						DRILL F/ 15200'-15412', WOB- 6/10K, RPM- 145 COMBINED, GPM- 214, MW- 14.8, VIS- 41, BG GAS- 450U, CONN GAS- 1400u WITH 20'
8/24/2008	06:00 - 11:30	5.50	DRL	1	DRLPRO	

Operations Summary Report

Legal Well Name: WV 15D-23-8-21

Common Well Name: WV 15D-23-8-21

Event Name: DRILLING

Contractor Name: Unit Drilling Co.

Rig Name: UNIT

Start: 6/9/2008

Rig Release: 9/5/2008

Rig Number: 109

Spud Date: 6/9/2008

End: 9/5/2008

Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
8/24/2008	06:00 - 11:30	5.50	DRL	1	DRLPRO	FLARE, NO LOSSES
	11:30 - 12:30	1.00	RIG	1	DRLPRO	LUBRICATE RIG & TOP DRIVE, FUNCTION HCR & COM
	12:30 - 17:30	5.00	DRL	1	DRLPRO	DRILL F/ 15412'-15605' DRLG WITH SAME PARAMETERS MW & VIS, NO LOSSES
	17:30 - 18:30	1.00	CIRC	1	DRLPRO	CIRC. OUT GAS KICK @ 15605'- 30 BBL GAIN WITH 35' FLARE
	18:30 - 06:00	11.50	DRL	1	DRLPRO	DRILL F/ 15605'-16060', WOB- 8/10K, RPM- 145 COMBINED, GPM- 214, MW- 14.8, VIS- 42, BG GAS- 600u, CONN GAS- 1660u WITH 15' FLARE, NO LOSSES
8/25/2008	06:00 - 06:30	0.50	DRL	1	DRLPRO	DRILL F/ 16060'-16065', WOB- 4/10K, RPM- 120-145 COMBINED, GPM- 195-214, MW- 14.8, VIS- 42, BG GAS- 450u. MUD MOTOR GETTING WEAK, PRESSURED UP & STALLED 3 TIMES
	06:30 - 08:00	1.50	CIRC	1	DRLPRO	CIRC & BUILD ECD PILL & TRIP SLUG
	08:00 - 09:00	1.00	SUR	1	DRLPRO	DROP SURVEY & CHECK FOR FLOW (FLOWING 1.5 BBL/HR)
	09:00 - 10:00	1.00	CIRC	1	DRLPRO	SPOT 50 BBL (16.3 PPG) ECD PILL ON BOTTOM & PUMP TRIP SLUG
	10:00 - 12:00	2.00	TRP	12	DRLPRO	TRIP OUT TO 12406'
	12:00 - 13:30	1.50	CIRC	1	DRLPRO	CIRC. BOTTOMS UP, SPOT 120 BBL (16.3 PPG) ECD PILL & PUMP TRIP SLUG
	13:30 - 14:00	0.50	TRP	12	DRLPRO	PULL ROT. HEAD ELEMENT
	14:00 - 18:00	4.00	TRP	12	DRLPRO	TRIP OUT F/ MUD MOTOR FAILURE & BIT
	18:00 - 19:00	1.00	RIG	1	DRLPRO	LUBRICATE RIG & TOP DRIVE
	19:00 - 00:30	5.50	RIG	2	DRLPRO	TOP DRIVE REPAIR- REPLACE CONTROL MODULE FOR LINK TILT
	00:30 - 02:00	1.50	TRP	12	DRLPRO	TRIP OUT BHA, HOLE FILL 22 BBLs OVER CALCULATED
	02:00 - 03:00	1.00	TRP	12	DRLPRO	BREAK BIT & CHANGE OUT MUD MOTORS, FUNCTIONED BLIND RAMS
8/26/2008	03:00 - 03:30	0.50	TRP	12	DRLPRO	SURFACE TEST MUD MOTOR
	03:30 - 06:00	2.50	TRP	12	DRLPRO	TRIP IN, BREAK CIRC. AFTER BHA, THEN EVERY 3000'
	06:00 - 08:30	2.50	TRP	12	DRLPRO	TRIP IN TO CSG SHOE @ 12050'
	08:30 - 10:00	1.50	CIRC	1	DRLPRO	CIRC. OUT ECD PILL & GAS
	10:00 - 11:30	1.50	TRP	12	DRLPRO	TRIP IN TO 15700'
	11:30 - 18:30	7.00	REAM	1	DRLPRO	REAM F/ 15700'-16065'
	18:30 - 20:00	1.50	DRL	1	DRLPRO	ATTEMPT TO DRILL, UNABLE TO GET ANY DIFFERENTIAL PRESSURE OR REACTIVE TORQUE, SUSPECT BROKEN DRIVE SHAFT IN MUD MOTOR
	20:00 - 21:30	1.50	CIRC	1	DRLPRO	CIRC. BOTTOMS UP & MIX ECD PILL & TRIP SLUG
	21:30 - 03:30	6.00	REAM	1	DRLPRO	BACK REAM OUT OF HOLE F/ 16065'-14540'
	03:30 - 05:00	1.50	CIRC	1	DRLPRO	CIRC. BOTTOMS UP
8/27/2008	05:00 - 06:00	1.00	CIRC	1	DRLPRO	SPOT 60 BBL ECD PILL @ 16.3 PPG
	06:00 - 07:30	1.50	TRP	12	DRLPRO	TRIP OUT USING PIPE SPINNERS TO 12030' (MUD MOTOR FAILURE)
	07:30 - 09:00	1.50	CIRC	1	DRLPRO	CIRC. BOTTOMS UP & SPOT 100 BBL ECD PILL @ 16.3 PPG
	09:00 - 09:30	0.50	TRP	12	DRLPRO	PULL ROT. HEAD ELEMENT
	09:30 - 16:30	7.00	TRP	12	DRLPRO	TRIP OUT USING PIPE SPINNERS F/ MUD MOTOR FAILURE
	16:30 - 17:00	0.50	TRP	1	DRLPRO	BREAK BIT & LAY DOWN MUD MOTOR (FOUND STATOR RUBBER IN BIT)
	17:00 - 18:00	1.00	RIG	1	DRLPRO	LUBRICATE RIG & TOP DRIVE, FUNCTIONED BLIND RAMS & CLEAN RIG FLOOR
	18:00 - 19:00	1.00	TRP	1	DRLPRO	MAKE UP & SURFACE TEST TORQUE BUSTER
	19:00 - 23:00	4.00	TRP	12	DRLPRO	TRIP IN TO CSG SHOE @ 12020', BREAK CIRC. EVERY 3000'
	23:00 - 23:30	0.50	TRP	12	DRLPRO	INSTALL ROT. HEAD ELEMENT
	23:30 - 00:30	1.00	RIG	6	DRLPRO	CUT DRLG LINE & RESET COM
	00:30 - 02:00	1.50	CIRC	1	DRLPRO	CIRC OUT ECD PILL & GAS
	02:00 - 04:30	2.50	TRP	12	DRLPRO	TRIP IN TO 15970'

Operations Summary Report

Legal Well Name: WV 15D-23-8-21
 Common Well Name: WV 15D-23-8-21
 Event Name: DRILLING
 Contractor Name: Unit Drilling Co.
 Rig Name: UNIT

Spud Date: 6/9/2008
 End: 9/5/2008
 Start: 6/9/2008
 Rig Release: 9/5/2008
 Group:
 Rig Number: 109

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
8/27/2008	04:30 - 05:00	0.50	REAM	1	DRLPRO	WASH 90' TO BOTTOM WITH NO FILL
	05:00 - 06:00	1.00	DRL	1	DRLPRO	DRILL F/ 16065'-16075', WOB- 8/12K, RPM- 65, GPM- 214, MW- 15, VIS- 44, BG GAS- 20u
8/28/2008	06:00 - 19:00	13.00	DRL	1	DRLPRO	DRILL F/ 16075'-16190', WOB- 8/14K, RPM- 55/70, GPM- 214, MW- 15, VIS- 41, BG GAS-360u, CONN GAS- 2900u WITH 30' FLARE, NO LOSSES
	19:00 - 20:00	1.00	RIG	1	DRLPRO	LUBRICATE RIG & TOP DRIVE, FUNCTION HCR & COM
	20:00 - 02:30	6.50	DRL	1	DRLPRO	DRILL F/ 16190'-16220', WOB- 12/18K, RPM- 55/65, GPM- 214, MW- 15, VIS- 41, BG GAS- 650u, CONN GAS- 2560u WITH 30' FLARE, NO LOSSES
	02:30 - 03:30	1.00	CIRC	1	DRLPRO	CIRC., MIX TRIP SLUG & FILL TRIP TANK
8/29/2008	03:30 - 04:30	1.00	CIRC	1	DRLPRO	SPOT 60 BBL ECD PILL, 1.5 PPG OVER & PUMP TRIP SLUG
	04:30 - 06:00	1.50	TRP	10	DRLPRO	TRIP OUT F/ BIT
	06:00 - 06:30	0.50	TRP	10	DRLPRO	TRIP OUT TO 12500'
	06:30 - 08:00	1.50	CIRC	1	DRLPRO	CIRC BOTTOMS UP & SPOT 120 BBL ECD PILL 1.5 PPG OVER
	08:00 - 08:30	0.50	TRP	10	DRLPRO	PULL ROT. HEAD ELEMENT
	08:30 - 14:00	5.50	TRP	10	DRLPRO	TRIP OUT, HOLE FILL 19 BBLs OVER CALCULATED
	14:00 - 14:30	0.50	TRP	1	DRLPRO	BREAK BIT & LAY DOWN TORQUE BUSTER, FUNCTIONED BLIND RAMS
	14:30 - 15:00	0.50	TRP	1	DRLPRO	PICK UP & SURFACE TEST MUD MOTOR
	15:00 - 16:00	1.00	TRP	10	DRLPRO	TRIP IN BHA & CHANGE OUT JARS
	16:00 - 20:00	4.00	TRP	10	DRLPRO	TRIP IN TO 12000', BREAK CIRC. EVERY 3000'
	20:00 - 20:30	0.50	TRP	10	DRLPRO	INSTALL ROT. HEAD ELEMENT
	20:30 - 21:30	1.00	RIG	1	DRLPRO	LUBRICATE RIG & TOP DRIVE
	21:30 - 22:30	1.00	CIRC	1	DRLPRO	CIRC. OUT ECD PILL & GAS
	22:30 - 00:30	2.00	TRP	10	DRLPRO	TRIP IN TO 16100'
8/30/2008	00:30 - 01:30	1.00	REAM	1	DRLPRO	WASH 120' TO BOTTOM & PATTERN BIT (NO FILL)
	01:30 - 06:00	4.50	DRL	1	DRLPRO	DRILL F/ 16220'-16240', WOB- 3/5, RPM- 504 COMBINED, GPM- 205, MW- 15.1, VIS- 44, BG GAS- 260u, TRIP GAS- 2700u WITH 40' FLARE, NO LOSSES
	06:00 - 08:00	2.00	DRL	1	DRLPRO	DRILL F/ 16240'-16248', WOB- 3/5K, RPM- 500 COMBINED, GPM- 205, MW- 15.1, VIS- 43, BG GAS- 120u, NO LOSSES
	08:00 - 14:00	6.00	RIG	2	DRLPRO	RIG REPAIR- #2 & 3 GENERATORS WENT DOWN, WAIT ON ELECTRICIAN & MECHANIC. FOUND BROKEN WIRES FOR TEMP. SENSOR ON #3 MOTOR. FOUND LOOSE WIRING IN #2 GENERATOR BAY
	14:00 - 14:30	0.50	DRL	1	DRLPRO	DRILL F/ 16248'-16252', DRLG WITH SAME PARAMETERS
	14:30 - 15:30	1.00	RIG	2	DRLPRO	#2 GENERATOR WENT DOWN AGAIN. UNDER VOLTAGE RELEASE CARD ON MAIN BREAKER IS BAD. ELECTRICIAN IS TRYING TO LOCATE A CARD. WILL DRILL WITH 2 GENERATORS.
	15:30 - 00:00	8.50	DRL	1	DRLPRO	DRILL F/ 16252'-16282', WOB- 3/7K, RPM- 504 COMBINED, GPM- 205, MW- 15, VIS-42, BG GAS- 420u, NO LOSSES
	00:00 - 01:00	1.00	RIG	1	DRLPRO	LUBRICATE RIG & TOP DRIVE, FUNCTION TOP PIPE RAMS & COM
	01:00 - 06:00	5.00	DRL	1	DRLPRO	DRILL F/ 16282'-16298', WOB- 4/7K, RPM- 520 COMBINED, GPM- 214, MW- 15, VIS- 42, BG GAS- 250u, CONN GAS- 1950u WITH 30' FLARE, NO LOSSES
	06:00 - 04:00	22.00	DRL	1	DRLPRO	DRILL F/ 16298'-16383', WOB- 1/6K, RPM- 520 COMBINED, GPM- 214, MW- 15, VIS- 41, BG GAS- 380u, CONN GAS- 1920u WITH 20' FLARE, NO LOSSES
8/31/2008	04:00 - 05:00	1.00	RIG	1	DRLPRO	LUBRICATE RIG & TOP DRIVE, FUNCTION LOWER PIPE RAMS & COM
	05:00 - 06:00	1.00	DRL	1	DRLPRO	RESTART BIT 5 TMES DUE TO STALLS LAST 24 HRS (BIT STUCK @ 16357', PULLED 30K OVER TO FREE BIT.)

Operations Summary Report

Legal Well Name: WV 15D-23-8-21

Common Well Name: WV 15D-23-8-21

Event Name: DRILLING

Contractor Name: Unit Drilling Co.

Rig Name: UNIT

Start: 6/9/2008

Rig Release: 9/5/2008

Rig Number: 109

Spud Date: 6/9/2008

End: 9/5/2008

Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
9/1/2008	06:00 - 12:00	6.00	DRL	1	DRLPRO	DRILL F/ 16383'-16398' (TD) WOB- 4/6K, RPM- 520 COMBINED, GPM- 214, MW- 15, VIS- 42, BG GAS- 380u, SEEPING 3 BBLS/HR
	12:00 - 13:30	1.50	CIRC	5	DRLPRO	CIRC. BOTTOMS UP SAMPLE
	13:30 - 14:30	1.00	TRP	14	DRLPRO	SHORT TRIP 10 STDS
	14:30 - 17:00	2.50	CIRC	1	DRLPRO	CIRC. BOTTOMS UP, SPOT 60 BBL ECD PILL @ 16.5 PPG & PUMP TRIP SLUG
	17:00 - 19:00	2.00	TRP	2	DRLPRO	TRIP OUT 40 STDS
	19:00 - 20:30	1.50	CIRC	1	DRLPRO	CIRC. BOTTOMS UP, SPOT 120 BBL ECD PILL @ 16.5 PPG & PUMP TRIP SLUG
	20:30 - 21:00	0.50	TRP	2	DRLPRO	PULL ROT. HEAD ELEMENT
	21:00 - 00:00	3.00	TRP	2	DRLPRO	TRIP OUT F/ LOGS
	00:00 - 01:00	1.00	CIRC	1	DRLPRO	PIPE CAME WET, DROP BALL & OPEN CIRC. SUB, PUMP 10 BBL TRIP SLUG
	01:00 - 02:30	1.50	TRP	2	DRLPRO	TRIP OUT F/ LOGS, HOLE FILL 22 BBLS OVER CALCULATED
	02:30 - 03:30	1.00	TRP	1	DRLPRO	BREAK BIT, LAY DOWN MUD MOTOR & CIRC. SUB, CLEAN FLOOR, FUNCTIONED BLIND RAMS
	03:30 - 05:00	1.50	LOG	1	DRLPRO	HOLD SAFETY MEETING & RIG UP SCHLUMBERGER LOGGING TOOLS
	05:00 - 06:00	1.00	LOG	1	DRLPRO	LOGGING- 1ST RUN PLATFORM EXPRESS
	06:00 - 19:30	13.50	LOG	1	EVALPR	LOGGING WITH SCHLUMBERGER, 1ST LOG- PLATFORM EXPRESS F/ 16398'-12025', HIT SEVERAL TIGHT SPOTS LOGGING OUT TO 13500', 2ND LOG- OIL BASE MICRO IMAGING F/ 13500'-12025', MONITOR WELL USING TRIP TANK- NO LOSSES OR GAINS.
9/2/2008	19:30 - 20:30	1.00	LOG	1	EVALPR	RIG DOWN LOGGING TOOLS
	20:30 - 01:00	4.50	TRP	15	EVALPR	MAKE UP BIT, BIT SUB & TRIP IN TO CSG SHOE, BREAK CIRC. EVERY 3000'
	01:00 - 01:30	0.50	TRP	15	EVALPR	INSTALL ROT. HEAD ELEMENT
	01:30 - 02:30	1.00	RIG	6	EVALPR	CUT DRLG LINE & RESET COM
	02:30 - 03:30	1.00	RIG	1	EVALPR	LUBRICATE RIG & TOP DRIVE
	03:30 - 05:00	1.50	CIRC	1	EVALPR	TRIP IN 8 STDS & CIRC. OUT ECD PILL @ 12560'
	05:00 - 06:00	1.00	TRP	15	EVALPR	TRIP IN TO 15500'
	06:00 - 06:30	0.50	TRP	15	DRLPRO	TRIP IN TO 16330'
	06:30 - 07:00	0.50	REAM	1	DRLPRO	WASH 68' TO BOTTOM, NO FILL
	07:00 - 10:00	3.00	CIRC	1	DRLPRO	CIRC. & CONDITION MUD, LOWER MW FROM 15.2 TO 15, VIS- 44
	10:00 - 11:30	1.50	CIRC	1	DRLPRO	SPOT 50 BBL ECD PILL 1.5 PPG OVER & PUMP TRIP SLUG
	11:30 - 13:00	1.50	TRP	2	DRLPRO	TRIP OUT 40 STDS
	13:00 - 15:00	2.00	CIRC	1	DRLPRO	CIRC. BOTTOMS UP, SPOT 80 BBL ECD PILL 1.5 PPG OVER & PUMP TRIP SLUG (HELD SAFETY MEETING WITH LAY DOWN CREW & RIGGED UP LAY DOWN MACHINE)
	15:00 - 22:00	7.00	TRP	3	DRLPRO	LAY DOWN DP
9/3/2008	22:00 - 23:30	1.50	TRP	2	DRLPRO	RIG DOWN LAY DOWN POLE & TRIP IN 40 STDS
	23:30 - 03:00	3.50	TRP	3	DRLPRO	RIG UP LAY DOWN POLE & LAY DOWN DP
	03:00 - 03:30	0.50	TRP	1	DRLPRO	PULL ROT. HEAD ELEMENT
	03:30 - 05:00	1.50	TRP	1	DRLPRO	LAY DOWN BHA
	05:00 - 06:00	1.00	TRP	1	DRLPRO	PULL WEAR BUSHING
	06:00 - 06:30	0.50	RIG	7	CSGPRO	HOLD SAFETY MEETING WITH ROCKY MTN. CSG CREW & LAY DOWN CREW
	06:30 - 09:00	2.50	CSG	1	CSGPRO	RIG UP CSG CREW
	09:00 - 19:00	10.00	CSG	2	CSGPRO	RUN 4.5" CSG, FILL PIPE & BREAK CIRC. EVERY 2000'
	19:00 - 19:30	0.50	CSG	2	CSGPRO	INSTALL ROT. HEAD ELEMENT
	19:30 - 20:30	1.00	CIRC	1	CSGPRO	CIRC. OUT ECD PILL & GAS @ 12560'
	20:30 - 23:30	3.00	CSG	2	CSGPRO	RUN 4.5" CSG, FILL PIPE & BREAK CIRC. EVERY 1500'
	23:30 - 00:00	0.50	REAM	1	CSGPRO	WASH 90' TO BOTTOM
9/4/2008						

Operations Summary Report

Legal Well Name: WV 15D-23-8-21

Common Well Name: WV 15D-23-8-21

Event Name: DRILLING

Contractor Name: Unit Drilling Co.

Rig Name: UNIT

Start: 6/9/2008

Rig Release: 9/5/2008

Rig Number: 109

Spud Date: 6/9/2008

End: 9/5/2008

Group:

Date	From - To	Hours	Code	Sub Code	Phase	Description of Operations
9/4/2008	00:00 - 02:30	2.50	CIRC	1	CSGPRO	CIRC. BOTTOMS UP
	02:30 - 03:30	1.00	CMT	1	CSGPRO	RIG DOWN FILL TOOL & RIG UP CEMENT HEAD
	03:30 - 05:00	1.50	CIRC	1	CSGPRO	CIRC. BOTTOMS UP, GPM- 195, MW- 14.8, VIS- 44
	05:00 - 06:00	1.00	CMT	2	CSGPRO	HOLD SAFETY MEETING WITH HALLIBURTON CEMENTERS & PRESSURE TEST LINE TO 12K
9/5/2008	06:00 - 08:00	2.00	CMT	2	CSGPRO	CEMENT 4.5" CSG WITH 700 SX OF MOUNTAIN "G" CEMENT, PLUG PUMPED, FLOATS HELD & HAD FULL RETURNS THRU OUT JOB. ESTIMATED TOP OF CEMENT @ 5500'
	08:00 - 10:00	2.00	CMT	1	CSGPRO	RIG DOWN CEMENTERS
	10:00 - 16:00	6.00	LOC	7	CSGPRO	TRANSFER OBM TO TANK FARM & START CLEANING MUD TANKS, FLUSH STACK, MUD LINES, CHOKE LINES & GASBUSTER WITH FRESH WATER & OPTICLEAN
	16:00 - 00:00	8.00	BOP	1	CSGPRO	NIPPLE DOWN BOP, RIG UP BOP LIFT, PICK STACK & SET SLIPS @ 165k STRING WT. & CUT OFF CSG, SET STACK DOWN & RIG DOWN BOP LIFT.
	00:00 - 06:00	6.00	LOC	4	CSGPRO	CLEAN & RIG DOWN FLOOR, FINISH CLEANING MUD TANKS, RIG RELEASED @ 0:600

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB NO. 1004-0137
Expires: July 31, 2010

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. Type of Well ☐ Oil Well ☒ Gas Well ☐ Dry ☐ Other
b. Type of Completion: ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr..

Other: _____

2. Name of Operator
Questar Exploration & Production Co.

3. Address 11002 EAST 17500 SOUTH - VERNAL, UT 84078

3a. Phone No. (include area code)
435.781.4342 - Dahn Caldwell

4. Location of Well (Report location clearly and in accordance with Federal requirements)*

668' FSL, 1994' FEL, SWSE, SEC 23-T8S-R21E

At surface

668' FSL, 1994' FEL, SWSE, SEC 23-T8S-R21E

At top prod. interval reported below

At total depth 668' FSL, 1994' FEL, SWSE, SEC 23-T8S-R21E

14. Date Spudded
06/06/200815. Date T.D. Reached
08/31/200816. Date Completed 09/24/2008
☐ D & A ☒ Ready to Prod.17. Elevations (DF, RKB, RT, GL)*
4854' KB18. Total Depth: MD 16,398'
TVD19. Plug Back T.D.: MD 16392'
TVD20. Depth Bridge Plug Set: MD N/A
TVD21. Type Electric & Other Mechanical Logs Run (Submit copy of each)
CBL/GR, Three Detector Litho Density/GR, Spectral Density DSN Array Comp True Res.22. Was well cored? ☒ No ☐ Yes (Submit analysis)
Was DST run? ☒ No ☐ Yes (Submit report)
Directional Survey? ☒ No ☐ Yes (Submit copy)

23. Casing and Liner Record (Report all strings set in well)

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sk. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
17-1/2"	13-3/8"	54.5#		538'		500 sxs		Surf - Circ	
12-1/4"	9-5/8"	47#		5,160'		1750 sxs		Surf - Circ	
8-1/2"	7"	26#		12,029'		2425 sxs		Surf - Unk	
6-1/8"	4-1/2"	15.1/16.6		16,394'		700 sxs		5,500' - Log	

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
N/A		N/A			N/A			

25. Producing Intervals

Formation	Top	Bottom	Perforation Interval	Size	No. Holes	Perf. Status
A) See Attachment One			See Attachment One			
B)						
C)						
D)						

27. Acid, Fracture, Treatment, Cement Squeeze, etc.

Depth Interval	Amount and Type of Material
See Attachment One	See Attachment One

28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
9/24/08	9/27/08	24	→	8	4,279	1,897			Flowing
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
30	N/A	1,900	→					PRODUCING	

28a. Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
			→						

*(See instructions and spaces for additional data on page 2)

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28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
			→						

28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
			→						

29. Disposition of Gas (Solid, used for fuel, vented, etc.)
SOLD

30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof. Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top
					Meas. Depth
GREEN RIVER	2481'			MANCOS 'B'	12446'
MAHOGANY	3228'			FRONTIER	15117'
WASATCH	5777'			DAKOTA SILT	15996'
MESA VERDE	8677'			DAKOTA	16199'
CASTLEGATE	11225'				
BLACK HAWK	11564'				
MANCOS	12015'				

32. Additional remarks (include plugging procedure):

FUTURE OIL PROSPECTS - GREEN RIVER & MAHOGANY

33. Indicate which items have been attached by placing a check in the appropriate boxes:

- ☐ Electrical/Mechanical Logs (1 full set req'd.)
 ☐ Geologic Report
 ☐ DST Report
 ☐ Directional Survey
☐ Sundry Notice for plugging and cement verification
 ☐ Core Analysis
☒ Other: ATTACHMENT ONE - PERF & FRAC INFO

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions)*

Name (please print) JIM SIMONTON

Title COMPLETION SUPERVISOR

Signature

Jim Simonton (off)

Date 12/01/2008

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 3)

(Form 3160-4, page 2)

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WV 15D 23 8 21 - ATTACHMENT ONE
PERFORATION DETAIL:

Open Perfs	Stimulation					Perf Status
6413' - 6414'	Frac w/	59,953	Lbs in	33,600	Gals	Open - Wasatch
6415' - 6416'						Open - Wasatch
7128' - 7129'						Open - Wasatch
7129' - 7130'						Open - Wasatch
8366' - 8367'						Open - Wasatch
8367' - 8368'						Open - Wasatch
10243' - 10244'	Frac w/	71,516	Lbs in	123,984	Gals	Open - Lower Mesa Verde
10247' - 10248'						Open - Lower Mesa Verde
10333' - 10334'						Open - Lower Mesa Verde
10345' - 10346'						Open - Lower Mesa Verde
10373' - 10374'						Open - Lower Mesa Verde
10382' - 10383'						Open - Lower Mesa Verde
10488' - 10489'						Open - Lower Mesa Verde
10688' - 10689'						Open - Lower Mesa Verde
10697' - 10698'						Open - Lower Mesa Verde
10820' - 10821'	Frac w/	71,140	Lbs in	124,446	Gals	Open - Lower Mesa Verde
10846' - 10847'						Open - Lower Mesa Verde
10849' - 10850'						Open - Lower Mesa Verde
10853' - 10854'						Open - Lower Mesa Verde
10994' - 10995'						Open - Lower Mesa Verde
11001' - 11002'						Open - Lower Mesa Verde
11004' - 11005'						Open - Lower Mesa Verde
11025' - 11026'						Open - Lower Mesa Verde
11034' - 11035'						Open - Lower Mesa Verde
11060' - 11061'						Open - Lower Mesa Verde
11117' - 11118'						Open - Lower Mesa Verde
11648' - 11652'	Frac w/	47,245	Lbs in	104,286	Gals	Open - Blackhawk
11711' - 11713'						Open - Blackhawk
12212' - 12214'						Open - Mancos
12345' - 12347'						Open - Mancos
12400' - 12402'	Frac w/	49,118	Lbs in	104,370	Gals	Open - Mancos
12448' - 12450'						Open - Mancos
12472' - 12474'						Open - Mancos
12568' - 12570'						Open - Mancos
12700' - 12702'						Open - Mancos
12898' - 12900'						Open - Mancos
13064' - 13066'						Open - Mancos

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13153' – 13155'	}	Frac w/	37,665	Lbs in	111,468	Gals	Open - Mancos
13204' – 13208'							Open - Mancos
13307' – 13309'							Open - Mancos
13414' – 13418'							Open - Mancos
13553' – 13557'	}	Frac w/	46,677	Lbs in	104,664	Gals	Open - Mancos
13667' – 13669'							Open - Mancos
13770' – 13772'							Open - Mancos
13889' – 13893'							Open - Mancos
14009' – 14011'							Open - Mancos
14126' – 14128'	}	Frac w/	31,745	Lbs in	90,846	Gals	Open - Mancos
14225' – 14227'							Open - Mancos
14329' – 14331'							Open - Mancos
14444' – 14446'							Open - Mancos
14553' – 14555'							Open - Mancos
14648' – 14650'							Open - Mancos
14693' – 14695'							Open - Mancos
14799' – 14804'	}	Frac w/	41,700	Lbs in	103,992	Gals	Open - Mancos
14902' – 14903'							Open - Mancos
15005' – 15007'							Open - Mancos
15123' – 15125'							Open - Frontier
15289' – 15290'							Open - Frontier
15452' – 15454'							Open - Frontier
15468' – 15470'							Open - Frontier
15506' – 15508'							Open - Frontier
15613' – 15615'	}	Frac w/	49,185	Lbs in	122,136	Gals	Open - Frontier
15690' – 15692'							Open - Frontier
15804' – 15805'							Open - Frontier
15918' – 15919'							Open - Frontier
16007' – 16009'							Open - Dakota Silt
16091' – 16093'							Open - Dakota Silt
16201' – 16203'							Open - Dakota SS
16232' – 16234'							Open - Dakota SS
16357' – 16359'	}	Frac w/	24,776	Lbs in	48,426	Gals	Open - Dakota 'C'
16364' – 16366'							Open - Dakota 'C'
16366' – 16368'							Open - Dakota 'C'

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Operations Summary Report - DRILLING

Well Name: WV 15D-23-8-21

Location: 23-8-S 21-E 8

Rig Name: UNIT

Spud Date: 6/9/2008

Rig Release: 9/5/2008

Rig Number: 109

Date	From - To	Hours	Code	Sub Code	Description of Operations
6/10/2008	06:00 - 10:00	4.00	LOC	2	RIG UP BUCKET RIG-DRILL 26" HOLE 90' DEEP-SET 20" PIPE AND CEMENT SAME- ACTUAL SPUD ON 6/9/08 AT 0700 HRS.
	10:00 - 01:00	15.00	DRL	9	MOVE IN & RIG UP AIR RIG- DRILL 17 1/2" HOLE F/ 90' TO 570' (32' OF RAT HOLE)- BLOW DOWN HOLE- LAY DOWN PIPE
	01:00 - 03:00	2.00	CSG	2	RUN 12 JOINTS OF 13 3/8", K-55, 54.5#, STC CASING-LAND CASING @ 538 FEET
	03:00 - 06:00	3.00	CMT	2	CEMENT 13 3/8" CASING AS PER PROGRAM: PUMP 60 BBLS. CLEAR WATER & 20 BBLS GEL WATER-MIX & PUMP 102.4 BBLS. 15.8PPG LEAD SLURRY-DISPLACE W/ 75.9 BBLS. CLEAR WATER-BUMP PLUG W. 900 PSI-CHECK FLOATS (OK)-FULL RETURNS DURING JOB/ 35 BBLS. CEMENT TO SURFACE
7/6/2008	06:00 - 18:00	12.00	LOC	4	RIG DOWN WITH CRANE, SOLIDS CONTROL, HOPPER, BAR HOPPERS, GAS BUSTER AND 50% FLARE LINES, HAUL ALL 5" DP AND BHA, LOWER DERRICK, ELECTRICAL LINES 50% DONE, TRANSFER 800 BBLS OIL BASE TO UP RIGHT
	18:00 - 06:00	12.00	LOC	4	RIG DOWN - LD DERRICK - PULL DRAWWPRKS LEADS - LD LIGHTS, WATER LINES, AIR, CLEAN IN SUB
7/7/2008	06:00 - 18:00	12.00	LOC	4	SET DERRICK ON GROUND, LAY RIG LINER OUT ON NEW LOCATION, 80% OF BACKEND MOVED OUT, DRAWWORKS DOWN, RT. TABLE ON WAY TO CASPER FOR REPAIRS, HYDRILL ON WAY TO CASPER FOR REPAIRS, UNSTRING DERRICK, STARTED HARBANDING TONITE - STEAMERS TO SHOW UP IN MORNINING FOR DERRICK - TRUCK PUSHER TO BE HERE ON MONDAY MORNING
7/8/2008	18:00 - 06:00	12.00	LOC	4	WAIT ON DAYLIGHTS
	06:00 - 18:00	12.00	LOC	3	STEAM DERRICK OFF, HARBAND BHA,FINISH RIG SUBS DOWN, SET SUBS, WELD ON WELLHEAD, SET MUDTANKS AND CHOKE HOUSE, SET IN 60% OF BACKEND IN, INSTALL NIGHT CAP, PREPARE OIL BASE FARM FOR MOVE, AT 1800 HYDRILL WAS BEING TESTED AND WILL BE ON LOCATION TUESDAY MORNING AT 0700, NO WORD ON RT. YET,
7/9/2008	18:00 - 06:00	12.00	LOC	3	WAIT ON DAYLIGHTS
	06:00 - 18:00	12.00	LOC	3	DIG UP BURIED FLARE LINES, INSTALL BOP,FINISH SETTING IN BACK END, SET BUSTER AND LINES TO CHOKE, SET DRAWWORKS, SOLIDS CONTROL,BOTH DOG HOUSES AND WIND WALLS, FLOOR PLATES, GRASSHOPPER SET,SUIT CASE SET,OILBASE FARM ISOLATION AREA READY FOR TANKS, DERRICK IN MORNING WITH OILBASE FARM, WELDERS CHANGEING OUT ALL TOP DRIVE TRACK TURN BUCKLE EARS AS THE TWO TOP ONES ARE TORN AND CRACKED-THEY WERE ONLY MADE FROM 3/8 AND THEY ARE NOW 1" - NEW FLARE LINE HOLDERS 60% DONE AND WE FILLED THEM WITH CEMENT TODAY
7/10/2008	18:00 - 06:00	12.00	LOC	3	WAIT ON DAYLIGHTS
	06:00 - 18:00	12.00	LOC	3	FINISHED SETTING BACKEND IN, FINISHEDSETTING UP MUD FARM, WELDERS FINISHED WORK IN DERRICK AND XRAYED WELDS, FINISHED SETTING IN SOLIDS CONTROL, PUT DERRICK TOGETHER AND SET ON FLOOR, MOVED SHACKS AND SET IN, START MOVING IN 4"PIPE, SET HOPPER IN
7/11/2008	18:00 - 06:00	12.00	LOC	3	WAIT ON DAYLIGHTS
	06:00 - 18:00	12.00	LOC	3	FINISH MOVING RIG IN AND SETUP, RELEASE TRUCKS AND CRANE, STRING UP, WORK ON NEW FLARE LINE STANDS, FINISH SOLIDS CONTROL, CHANGE OUT KELLY HOSE, START CHANGING OUT TOP DRIVE HOSES, START RIG UP, CHANGING VALVES IN MUD TANKS, HAUL 4" DP , HAUL OILBASE TO TANKS - OLD LOCATION 100% CLEARED OFF, CHANGED FLOW LINE LOCATION
7/12/2008	18:00 - 06:00	12.00	LOC	4	WAIT ON DAYLIGHTS
	06:00 - 18:00	12.00	LOC	4	FINISH CHANGING OUT TOP DRIVE HOSES, RAISE DERRICK, BRIDAL DOWN,

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Operations Summary Report

Well Name: WV 15D-23-8-21

Location: 23- 8-S 21-E 8

Rig Name: UNIT

Spud Date: 6/9/2008

Rig Release: 9/5/2008

Rig Number: 109

Date	From - To	Hours	Code	Sub Code	Description of Operations
7/12/2008	06:00 - 18:00	12.00	LOC	4	CHANGE OIL ON SWIVEL AND INSTALL RIG UP FLOOR AND GEL GATES, FINISH REPAIRS ON GUN LINE VALVES AND AGITATOR, HANG SERVICE LOOP, WILL BREAK TOUR ON SATURDAY, FINISHED FLARE LINES, PREPARE OILBASE FARM FOR CIRCULATING, PUT YELLOW DOG ONLINE TO CIRCULATE PIT WITH LIME, WILL FILL MUD AND DAYTANKS IN MORNING.
7/13/2008	06:00 - 18:00	12.00	LOC	4	FINISH PUTTING TORQUE TUBE TOGETHER AND HANG, RIG UP HIGH PRESSURE DRESSER SLEEVE ON FLOWLINE, START RIGGING UP TOP DRIVE, FIX LEAKS ON PITS AND CHANGE OUT ONE MORE VALVE, FILL PITS AND DAY TANK, START ON STAND PIPE
	18:00 - 06:00	12.00	LOC	4	RIG UP KELLY TO TOP DRIVE AND TORQUE UP ALL JOINTS, MAKE UP REFABRICATED STAND PIPE, CENTER STACK AND HAVE WELDER REFAB FLOW LINE, CHANGE OIL IN TOP DRIVE, PREPARE FOR TESTING BOP'S, WORK ON PUMPS
7/14/2008	06:00 - 08:00	2.00	BOP	1	FINISH NIPPLE UP FINLLY, TORQUED UP ALL NUTS
	08:00 - 13:00	5.00	BOP	2	TEST BOP'S - 5000 PSI TEST
	13:00 - 18:00	5.00	LOC	4	RIG UP BOARD, RIG FLOOR WITH SUBS ECT., INSTALL WEAR BUSHING, PUMP THREW PUMPS AND FLOW LINE, FIX LEAKS, PRESSURE TEST MUD LINES, GET WELDER FOR KELLY HOSE, WAITING FOR PARTS FROM CASPER FOR #2 MOTOR, BLEW INJECTOR THREW VALVE COVER, DAYLIGHTS CREW IS JUST KILLING ME, STAYED QUIT UNTIL 1300 AND BLEW UP, HAVE NOT PUT THEM ON DAYWORK YET, TOO MUCH TODO WITH THIS CREW, ME AND MUD ENGINEER WILL ALSO RACK AND TALLY BHA FOR THEM - FINISHED MUD DOCK LANDING, SHOULD WORK WELL WITH VERY SHORT BACKEND AND TANK FARM SET IN,
	18:00 - 03:30	9.50	LOC	4	TAKE KELLY HOSE DOWN, WAIT ON WELDER TO REPAIR LEAK, PUT REPAIRED CATWALK EXTENTION ON, WHILE WAITING ON WELDER THEY ARE CHANGING OIL IN #3 MOTOR SO WE WE CANT PICK UP BHA WITH ONE MOTOR, KELLY COOLED OFF SO WE REINSTALLED, RE-PRESSURE TEST SURFACE LINES, STILL LEAKING, REPAIR BYPASS VALVE ON #1 PUMP, REPAIR BOTH POP-OFF VALVES, REPLACE DISCHARGE SEAT IN #1 PUMP, PARTS SHOWED UP AT 0200 THIS AM FOR #2 MOTOR, MOTOR REPAIRED BY MECHANIC
	03:30 - 04:30	1.00	RIG	6	CUT 156' OF BRAND NEW DRILL LINE FROM DRUM, TO MUCH ON DRUM AND STARTED CROSS WRAPPING WHEN RUNNING BLOCKS UP,
	04:30 - 06:00	1.50	TRP	1	RIG IS NOW IN PROPER WORKING ORDER AND WILL PUT ON PAY-ROLL AT 0600 THIS MORNING AND WILL GIVE 8 HOURS BACK TO UNIT ON RIG DOWN, START PICKING UP BHA - MUD TANKS HAVE 1400 BBLs AND ALL MUD PRODUCTS ADDED - READY TO ROCK IN ROLL ?
7/15/2008	06:00 - 10:00	4.00	TRP	1	PICK UP BHA
	10:00 - 10:30	0.50	BOP	1	INSTALL RT. HEAD
	10:30 - 11:00	0.50	RIG	2	RE WRAP DRILL LINE ON DRUM
	11:00 - 12:00	1.00	EQT	1	CIRCULATE AND CHECK BOTH CHOKES AND BUSTER LINES FOR LEAKS, TEST CASING TO 1500 PSI - OK
	12:00 - 15:30	3.50	DRL	4	DRILL SHOE TRACK - PLUG, FLOAT COLLAR AND SHOE IN CORRECT SPOT
	15:30 - 16:00	0.50	EQT	2	FIT = 10.3 - 63# SURFACE W/ 8.4
	16:00 - 16:30	0.50	DRL	1	DRILL TO KELLY DOWN
	16:30 - 17:00	0.50	CIRC	1	PUMP TWO SWEEPS FOR TRIP OUT
	17:00 - 18:00	1.00	TRP	2	TRIP OUT WET TO CHANGE OUT TO HOLE OPENER AND MM
	18:00 - 19:00	1.00	TRP	1	LD BIT AND FLOAT SUB, PICK UP MM AND HOLEOPENER AND IBS - TORQUE ALL
	19:00 - 19:30	0.50	CIRC	1	SURFACE TEST MM
	19:30 - 21:30	2.00	TRP	2	TRIP IN TO HOLE
	21:30 - 06:00	8.50	DRL	1	DRILL FROM 570 TO 1000'

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Operations Summary Report

Well Name: WV 15D-23-8-21
 Location: 23-8-S 21-E 8
 Rig Name: UNIT

Spud Date: 6/9/2008
 Rig Release: 9/5/2008
 Rig Number: 109

Date	From - To	Hours	Code	Sub Code	Description of Operations
7/16/2008	06:00 - 16:00	10.00	DRL	1	DRILL FROM 1000' TO 1410
	16:00 - 16:30	0.50	SUR	1	SURVEY - DEPTH = 1296 - 3 - 303.8
	16:30 - 17:30	1.00	RIG	1	SERVICE RIG AND TOP DRIVE
	17:30 - 18:00	0.50	DRL	1	DRILL FROM 1410 TO 1440
	18:00 - 00:00	6.00	DRL	1	DRILL FROM 1440 TO 1690
	00:00 - 01:00	1.00	DRL	1	CONNECTIONS AND SLOW PUMP RATES FOR BOTH CREWS
	01:00 - 06:00	5.00	DRL	1	DRILL FROM 1690 TO 1975 - NO LOSSES THAT WE CAN TELL - TORQUE GETTING BETTER
7/17/2008	06:00 - 06:30	0.50	RIG	2	PUMP REPAIR- REPLACE BAD SWAB IN #2 PUMP
	06:30 - 13:30	7.00	DRL	1	DRILL F/ 1975'-2244', WOB- 10-12K, RPM- 155 COMBINED, GPM- 770, MW- 8.6, VIS- 29, PUMPING 10 BBL HI VIS SWEEPS EVERY 100'
	13:30 - 14:30	1.00	RIG	1	LUBRICATE RIG & TOP DRIVE, FUNCTION TOP PIPE RAMS & COM
	14:30 - 15:00	0.50	SUR	1	CIRC & SURVEY, SURVEY DEPTH- 2164, .4 INC, 57.9 AZ
	15:00 - 16:30	1.50	DRL	1	DRILL F/ 2244'-2308', DRLG WITH SAME PARAMETERS, MW & VIS
	16:30 - 17:30	1.00	RIG	2	PUMPS AIRED UP DUE TO FOAMED UP MUD, WORK FOAM OUT OF MUD WITH DEFOAMER & REPRIME PUMPS
	17:30 - 19:00	1.50	DRL	1	DRILL F/ 2308'-2355', DRLG WITH SAME PARAMETERS, MW- 8.6, VIS- 30
	19:00 - 19:30	0.50	RIG	2	PUMP REPAIR- CHANGE BAD SWAB IN #2 PUMP & REPAIR ROD OILER LINE
	19:30 - 20:30	1.00	DRL	1	DRILL F/ 2355'-2372', WOB- 12-14K, RPM- 155 COMBINED, GPM- 771, MW- 8.6, VIS- 30
	20:30 - 21:00	0.50	RIG	2	PUMP REPAIR- CHANGE BAD SWAB IN #1 PUMP & UNPLUG ROD OILER LINE
	21:00 - 05:00	8.00	DRL	1	DRILL F/ 2372'-2527', WOB- 12-15K, RPM- 155 COMBINED, GPM- 771, MW- 8.6, VIS- 29, PUMPING 10 BBL HI VIS SWEEPS AS NEEDED
	05:00 - 06:00	1.00	CIRC	1	MIX TRIP SLUG
	06:00 - 06:30	0.50	SUR	1	DROP SURVEY & PUMP TRIP SLUG
7/18/2008	06:30 - 07:00	0.50	TRP	10	TRIP OUT TO BHA
	07:00 - 07:30	0.50	TRP	10	PULL ROT. HEAD ELEMENT
	07:30 - 09:30	2.00	TRP	10	TRIP OUT BHA, HOLE FILL 24 BBLs OVER CALCULATED, FUNCTIONED BLIND RAMS
	09:30 - 11:00	1.50	TRP	1	CHANGE OUT BIT, HOLE OPENER & MUD MOTOR
	11:00 - 12:00	1.00	RIG	1	LUBRICATE RIG & TOP DRIVE, REPLACED 2 BAD VALVES IN SUCTION TANK
	12:00 - 12:30	0.50	TRP	1	SURFACE TEST MUD MOTOR
	12:30 - 13:30	1.00	TRP	10	TRIP IN & INSTALL ROT. HEAD ELEMENT
	13:30 - 14:00	0.50	REAM	1	WASH 65' TO BOTTOM, NO FILL
	14:00 - 02:00	12.00	DRL	1	DRILL F/ 2527'-2698', WOB- 16-22K, RPM- 170 COMBINED, GPM- 771, MW- 8.7, VIS- 29, PUMPING 10 BBL HI VIS SWEEPS AS NEEDED
	02:00 - 03:00	1.00	RIG	2	PUMP REPAIR- CHANGE SWAB & REPAIR ROD OILER LINE IN #1PUMP
	03:00 - 06:00	3.00	DRL	1	DRILL F/ 2698'-2745', WOB- 18-2K, RPM- 170 COMBINED, GPM- 771, MW- 8.7, VIS- 28, PUMPING 10 BBL HI VIS SWEEPS AS NEEDED.
	06:00 - 11:30	5.50	DRL	1	DRILL F/ 2745'-2850', WOB- 18-22K, RPM- 150 COMBINED, GPM- 771, MW- 8.7, VIS- 28, PUMPING HI VIS SWEEPS AS NEEDED, NO TRONA WATER FLOWS
	11:30 - 12:30	1.00	RIG	2	TOP DRIVE MOTOR OVER HEATED, PULL GAURDS & PRESSURE WASH RADIATOR
7/19/2008	12:30 - 13:30	1.00	RIG	1	LUBRICATE RIG & TOP DRIVE, FUNCTION LOWER PIPE RAMS & COM
	13:30 - 19:00	5.50	DRL	1	DRILL F/ 2850'-2962', WOB- 20-23K, RPM- 150 COMBINED, GPM- 771, PUMPING HI VIS SWEEPS AS NEEDED
	19:00 - 19:30	0.50	SUR	1	DROP SURVEY & PUMP TRIP SLUG
	19:30 - 20:00	0.50	TRP	10	TRIP OUT F/ BIT & HOLE OPENER
	20:00 - 20:30	0.50	TRP	10	PULL ROT. HEAD ELEMENT
	20:30 - 22:00	1.50	TRP	10	TRIP OUT BHA, HOLE FILL 17 BBLs OVER CALCULATED
	22:00 - 23:30	1.50	TRP	1	BREAK BIT & LAY DOWN MUD MOTOR, PONY DC, IBS & HOLE OPENER, FUNCTION BLIND RAMS
	23:30 - 00:30	1.00	TRP	1	PICK UP & SURFACE TEST NEW MUD MOTOR

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Operations Summary Report

Well Name: WV 15D-23-8-21

Location: 23- 8-S 21-E 8

Rig Name: UNIT

Spud Date: 6/9/2008

Rig Release: 9/5/2008

Rig Number: 109

Date	From - To	Hours	Code	Sub Code	Description of Operations
7/19/2008	00:30 - 02:00	1.50	TRP	10	TRIP IN, FILL PIPE & BREAK CIRC. AFTER BHA
	02:00 - 02:30	0.50	TRP	10	INSTALL ROT. HEAD ELEMENT
	02:30 - 03:30	1.00	TRP	10	TRIP IN
	03:30 - 04:00	0.50	REAM	1	REAM OUT 30' OF 8 3/4" HOLE
	04:00 - 06:00	2.00	DRL	1	DRILL F/ 2962'-3005', WOB- 8/12K, RPM- 160 COMBINED, GPM- 728, MW- 8.8, VIS- 28, BG GAS- 98u, TRIP GAS- 480u W/ 4' FLARE
7/20/2008	06:00 - 12:30	6.50	DRL	1	DRILL F/ 3005'-3282', WOB- 14-16K, RPM- 160 COMBINED, GPM- 728, MW- 8.8, VIS- 28, PUMPING 10 BBL HI VIS SWEEPS AS NEEDED, NO TRONA WATER FLOWS.
	12:30 - 13:30	1.00	RIG	1	LUBRICATE RIG & TOP DRIVE, FUNCTION SUPER CHOKE & COM
	13:30 - 06:00	16.50	DRL	1	DRILL F/ 3282'-3805', WOB- 16K, RPM- 160 COMBINED, GPM- 728, MW- 8.7, VIS- 28, BG GAS- 1750u, CONN GAS- 3800u W/ 4' FLARE, PUMPING 10 BBL HI VIS SWEEPS AS NEEDED, PICKED UP 1/2" WATER FLOW @ 3650, FLOWING 15 BBLS/HR
7/21/2008	06:00 - 12:00	6.00	DRL	1	DRILL F/ 3805'-3962', WOB- 16-18K, RPM- 160 COMBINED, GPM- 728, MW- 8.8, VIS- 29, BG GAS- 1950u, CONN GAS- 4500u, NO FLARE, WELL FLOWING FRESH WATER @ 25 BBLS/HR, PUMPING HI VIS SWEEPS AS NEEDED.
	12:00 - 13:00	1.00	RIG	1	LUBRICATE RIG & TOP DRIVE, FUNCTION TOP PIPE RAMS & COM, CHECK FLOW- FLOWING 28 BBLS/HR
	13:00 - 06:00	17.00	DRL	1	DRILL F/ 3962'-4374', WOB- 16-18K, RPM- 160 COMBINED, GPM- 728, MW- 8.7, VIS- 28, BG GAS- 2900u, CONN GAS- 5570u, PUMPING HI VIS & BIT BALLING SWEEPS AS NEEDED, FRESH H2O FLOW- 20-30 BBLS/HR
7/22/2008	06:00 - 07:00	1.00	DRL	1	DRILL F/ 4374'-4395', WOB- 16-18K, RPM- 160 COMBINED, GPM- 728, MW- 8.7, VIS- 29, BG GAS- 2300u, WELL FLOWING 20 BBLS/HR
	07:00 - 08:00	1.00	RIG	2	REPLACE LINER GASKET IN #2 PUMP
	08:00 - 14:30	6.50	DRL	1	DRILL F/ 4395'-4581', DRLG WITH SAME PARAMETERS, MW & VIS, WELL FLOWING 17 BBLS/HR
	14:30 - 15:30	1.00	RIG	1	LUBRICATE RIG & TOP DRIVE, FUNCTION ANNULAR & COM
	15:30 - 06:00	14.50	DRL	1	DRILL F/ 4581'- 4910', WOB- 16-18K, RPM- 160 COMBINED, GPM- 728, MW- 8.9, VIS- 32, BG GAS- 1260u, CONN GAS- 5060u, LIGHT MUD UP @ 4600' STOPPED WATER FLOW
7/23/2008	06:00 - 07:30	1.50	DRL	1	DRILL F/ 4915'-4946', WOB- 16-20K, RPM- 160 COMBINED, GPM- 728, MW- 9, VIS- 32, BG GAS- 950u, NO FLOW WHILE DRLG & NO LOSSES
	07:30 - 08:00	0.50	SUR	1	DROP SURVEY & PUMP TRIP SLUG, FLOW CHECK- FLOWING 5 BBLS/HR
	08:00 - 09:30	1.50	TRP	10	TRIP OUT TO BHA
	09:30 - 10:00	0.50	TRP	10	PULL ROT. HEAD ELEMENT
	10:00 - 12:00	2.00	TRP	10	TRIP OUT BHA (WET), HOLE FILL 8 BBLS UNDER CALCULATED
	12:00 - 13:00	1.00	TRP	1	BREAK BIT & RETRIEVE SURVEY TOOL & LAY DOWN MUD MOTOR, FUNCTIONED BLIND RAMS
	13:00 - 14:00	1.00	RIG	1	LUBRICATE RIG & TOP DRIVE, CLEAN FLOOR
	14:00 - 15:00	1.00	TRP	1	PICK UP & SURFACE TEST MUD MOTOR
	15:00 - 16:30	1.50	TRP	10	TRIP IN, FILL PIPE & BREAK CIRC. EVERY 2000'
	16:30 - 17:00	0.50	TRP	10	INSTALL ROT. HEAD ELEMENT
	17:00 - 17:30	0.50	TRP	10	FINISH TRIPPING IN
	17:30 - 18:00	0.50	REAM	1	WASH 85' TO BOTTOM WITH 3' OF FILL
	18:00 - 00:30	6.50	DRL	1	DRILL F/ 4946'-5175', WOB- 14-18K, RPM 125 COMBINED, GPM- 728, MW- 8.9, VIS- 32, BG GAS- 400u, CONN GAS- 1350u, TRIP GAS- 6470 W/ 5' FLARE, FRESH WATER FLOW- 5 BBLS/HR
	00:30 - 01:30	1.00	CIRC	5	CIRC. BOTTOMS UP SAMPLE (100% SHALE W/ TRACE OF LIMESTONE)
	01:30 - 02:30	1.00	TRP	14	SHORT TRIP 10 STDs
7/24/2008	02:30 - 05:30	3.00	CIRC	1	CIRC. & CONDITION MUD F/ RUNNING CSG
	05:30 - 06:00	0.50	CIRC	1	FLOW CHECK & PUMP TRIP SLUG, FLOWING 5 BBLS/HR
	06:00 - 09:00	3.00	TRP	2	TRIP OUT TO RUN 9 5/8" CSG

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Operations Summary Report

Well Name: WV 15D-23-8-21

Location: 23- 8-S 21-E 8

Rig Name: UNIT

Spud Date: 6/9/2008

Rig Release: 9/5/2008

Rig Number: 109

Date	From - To	Hours	Code	Sub Code	Description of Operations
7/24/2008	09:00 - 10:30	1.50	TRP	1	LAY DOWN 8" BHA
	10:30 - 11:30	1.00	TRP	2	PULL WEAR BUSHING
	11:30 - 14:00	2.50	CSG	1	HOLD SAFETY MEETING & RIG UP ROCKY MTN CSG. CREW
	14:00 - 21:30	7.50	CSG	2	MAKE UP FLOAT EQUIPMENT & RUN 9 5/8" CSG, FILL PIPE & BREAK CIRC. EVERY 1200', LOST 62 BBLS RUNNING CSG.
	21:30 - 22:00	0.50	REAM	1	WASH DOWN LAST 35' & LAND CSG
	22:00 - 01:30	3.50	CIRC	1	CIRC. & CONDITION MUD, RIG DOWN CSG CREW & LAY DOWN MACHINE, GPM- 430
	01:30 - 05:00	3.50	CSG	2	LAY DOWN LANDING JT., INSTALL PACK OFF ASSEMBLY & CEMENT ISOLATION TOOL, TEST PACKOFF TO 8000 PSI & VOID TO 5000 PSI
7/25/2008	05:00 - 06:00	1.00	CMT	1	RIG UP HALLIBURTON LINES
	06:00 - 08:00	2.00	CMT	1	RIG UP HALLIBURTON CEMENT HEAD & LINES
	08:00 - 10:00	2.00	CIRC	1	CIRC. BOTTOMS UP THRU "A" SECTION WELLHEAD
	10:00 - 11:00	1.00	CMT	2	HOLD SAFETY MEETING & PRESSURE TEST CEMENT LINES TO 6000 PSI, N2 LINES TO 8000 PSI
	11:00 - 16:00	5.00	CMT	2	CEMENT CSG WITH 1435 SX FOAMED CEMENT , 230 SX UNFOAMED TAIL & 200 SX CAP CEMENT. PLUG DID NOT BUMP, FLOATS HELD, RECOVERD 180 BBLS FOAMED CEMENT BACK TO SURFACE
	16:00 - 18:00	2.00	CMT	1	RIG DOWN CEMENTERS & LAY DOWN CEMENT ISOLATION TOOL
	18:00 - 23:30	5.50	BOP	2	PRESSURE TEST BOP- 10000 HI, 250 LOW, ANNULAR- 5000, CSG- 1500
	23:30 - 00:00	0.50	BOP	2	INSTALL WEAR BUSHING
	00:00 - 01:00	1.00	TRP	2	PICK UP & SURFACE TEST MUD MOTOR
	01:00 - 03:30	2.50	TRP	2	TRIP IN, FILL PIPE & BREAK CIRC. EVERY 2000'
	03:30 - 04:00	0.50	TRP	2	INSTALL ROT. HEAD ELEMENT
	04:00 - 04:30	0.50	TRP	2	TRIP IN, TAGGED CEMENT @ 4855'
	04:30 - 06:00	1.50	DRL	1	DRILL CEMENT @ 4950'
	06:00 - 08:30	2.50	DRL	4	DRILL CEMENT & FLOAT COLLAR F/ 4990'-5130'
7/26/2008	08:30 - 09:30	1.00	RIG	1	LUBRICATE RIG & TOP DRIVE, FUNCTION COM
	09:30 - 10:00	0.50	DRL	4	DRILL CEMENT & SHOE F/ 5130'-5175'
	10:00 - 10:30	0.50	DRL	1	DRILL F/ 5175'-5185', WOB- 16K, RPM- 125 COMBINED, GPM- 425, MW- 9, VIS- 32
	10:30 - 11:30	1.00	EQT	2	CIRC. & FIT TO 13.5 EQUIVALENT (OK)
	11:30 - 18:30	7.00	DRL	1	DRILL F/ 5185'-5345', WOB- 22-26K, RPM- 125 COMBINED, GPM- 470, MW- 9, VIS- 31
	18:30 - 19:00	0.50	REAM	1	WORK THRU TIGHT HOLE F/ 5345'-5310'
	19:00 - 06:00	11.00	DRL	1	DRILL F/ 5345'-5468', WOB- 24-28K, RPM- 125 COMBINED, GPM- 470, MW- 8.9, VIS- 32, BG GAS- 20u, CONN GAS- 50u, SEEPING 4 BBLS/HR
7/27/2008	06:00 - 14:30	8.50	DRL	1	DRILL F/ 5468'-5590', WOB- 28-32K, RPM- 120 COMBINED, GPM- 470, MW- 8.9, VIS- 34, SEEPING 4 BBLS/HR
	14:30 - 15:30	1.00	RIG	1	LUBRICATE RIG & TOP DRIVE, FUNCTION HCR & COM
	15:30 - 16:00	0.50	SUR	1	DROP SURVEY & PUMP TRIP SLUG
	16:00 - 16:30	0.50	TRP	10	TRIP OUT 10 STDs
	16:30 - 17:00	0.50	TRP	10	PULL ROT. HEAD ELEMENT
	17:00 - 17:30	0.50	TRP	10	TRIP OUT
	17:30 - 18:00	0.50	RIG	2	REPAIR AIR LINE ON LOW DRUM CLUTCH
	18:00 - 19:00	1.00	TRP	10	TRIP OUT F/ BIT #5, HOLE FILL 22 BBLS OVER CALCULATED
	19:00 - 19:30	0.50	TRP	1	BREAK BIT & LAY DOWN MUD MOTOR, FUNCTIONED BLIND RAMS
	19:30 - 20:00	0.50	TRP	1	PICK UP & SURFACE TEST MUD MOTOR
	20:00 - 21:30	1.50	TRP	10	TRIP IN TO CSG SHOE, FILL PIPE & BREAK CIRC. EVERY 2000'
	21:30 - 22:00	0.50	TRP	10	INSTALL ROT. HEAD ELEMENT
	22:00 - 23:30	1.50	RIG	6	CUT DRLG LINE
	23:30 - 00:00	0.50	REAM	1	WASH 90' TO BOTTOM
	00:00 - 06:00	6.00	DRL	1	DRILL F/ 5590'-5745', WOB- 10/12K, RPM- 130 COMBINED, GPM- 385, MW- 8.9,

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Operations Summary Report

Well Name: WV 15D-23-8-21

Location: 23-8-S 21-E 8

Rig Name: UNIT

Spud Date: 6/9/2008

Rig Release: 9/5/2008

Rig Number: 109

Date	From - To	Hours	Code	Sub Code	Description of Operations
7/27/2008	00:00 - 06:00	6.00	DRL	1	VIS- 34, SEEPING 4 BBLS/HR, BG GAS- 25u, CONN GAS- 40u
7/28/2008	06:00 - 12:00	6.00	DRL	1	DRILL F/ 5745'-5957', WOB- 12K, RPM- 148 COMBINED, GPM- 450, MW- 9, VIS- 34, BG GAS- 40u, CONN GAS- 100u, SEEPING 2-3 BBLS/HR, PUMPING BIT BALLING SWEEPS AS NEEDED.
	12:00 - 13:00	1.00	RIG	1	LUBRICATE RIG & TOP DRIVE, FUNCTION ANNULAR & COM
	13:00 - 06:00	17.00	DRL	1	DRILL F/ 5957'-6573', WOB- 12-14K, RPM- 148 COMBINED, GPM- 470, MW- 9, VIS- 35, BG GAS- 40u, CONN GAS- 100u, SEEPING 2-3 BBLS/HR, PUMPING BIT BALLING SWEEPS AS NEEDED
7/29/2008	06:00 - 15:00	9.00	DRL	1	DRILL F/ 6573'-6940', WOB- 12-15K, RPM- 160 COMBINED, GPM- 470, MW- 9.1, VIS- 34, BG GAS- 40u, CONN GAS- 80u, SEEPING 2-3 BBLS/HR, PUMPING BIT BALLING SWEEPS AS NEEDED.
	15:00 - 16:00	1.00	RIG	1	LUBRICATE RIG & TOP DRIVE, FUNCTION TOP PIPE RAMS & COM
	16:00 - 06:00	14.00	DRL	1	DRILL F/ 6940'-7325', WOB- 14/16K, RPM- 140/160 COMBINED, GPM- 385/470, MW- 9.1, VIS- 34, BG GAS- 45u, CONN GAS- 180u, LOST 80 BBLS @ 7115, PUMPED TWO 30 BBL SWEEPS WITH 10% LCM, CURRENTLY LOSING 6-8 BBLS/HR & PUMPING 10 BBL LCM SWEEPS HOURLY & BIT BALLING SWEEPS AS NEEDED.
7/30/2008	06:00 - 07:00	1.00	DRL	1	DRILL F/ 7325'-7372', WOB- 14/15K, RPM- 150 COMBINED, GPM- 428, MW- 9.2, VIS- 34, BG GAS- 40, SEEPING 6-8 BBLS/HR, PUMPING 10 BBL LCM SWEEPS HOURLY
	07:00 - 07:30	0.50	RIG	3	REMOVE SUCTION SCREENS FROM PUMP SUCTIONS
	07:30 - 11:30	4.00	DRL	1	DRILL F/ 7372'-7559', DRLG WITH SAME PARAMETERS, MW & VIS, SEEPING 5-6 BBLS/HR, PUMPING 10 BB LCM SWEEPS HOURLY
	11:30 - 12:30	1.00	RIG	1	LUBRICATE RIG & TOP DRIVE, FUNCTION BOTTOM PIPE RAMS & COM
	12:30 - 06:00	17.50	DRL	1	DRILL F/ 7559'-7925', WOB- 14/20K, RPM- 150 COMBINED, GPM- 428, MW- 9.2, VIS- 35, BG GAS- 55u, CONN GAS- 430u, SEEPING 5-6 BBLS/HR, PUMPING BIT BALLING & LCM SWEEPS AS NEEDED
7/31/2008	06:00 - 16:30	10.50	DRL	1	DRILL FROM 7925 TO 8121
	16:30 - 17:30	1.00	RIG	1	SERVICE RIG AND TOP DRIVE
	17:30 - 18:00	0.50	DRL	1	DRILL FROM 8121 TO 8150
	18:00 - 23:30	5.50	DRL	1	DRILL FROM 8150 TO 8245
	23:30 - 00:30	1.00	DRL	1	SLOW PUMP RATES AND CONNECTIONS FOR BOTH TOURS
	00:30 - 06:00	5.50	DRL	1	DRILL FROM 8245 TO 8320 - PUMPING 10 BBL BIT BALLING SWEEPS WHEN NEEDED
8/1/2008	06:00 - 14:30	8.50	DRL	1	DRILL FROM 8320 TO 8492
	14:30 - 15:30	1.00	RIG	1	SERVICE RIG AND TOP DRIVE
	15:30 - 18:00	2.50	DRL	1	DRILL FROM 8492 TO 8579
	18:00 - 23:30	5.50	DRL	1	DRILL FROM 8579 TO 8676
	23:30 - 00:30	1.00	DRL	1	SPR AND CONNECTIONS FOR BOTH CREWS
	00:30 - 06:00	5.50	DRL	1	DRILL FROM 8676 TO 8810 - BG GAS NOW UP TO 300 UNITS
8/2/2008	06:00 - 16:30	10.50	DRL	1	DRILL FROM 8810 TO 9047
	16:30 - 17:30	1.00	RIG	1	SERVICE RIG AND TOP DRIVE
	17:30 - 18:00	0.50	DRL	1	DRILL FROM 9047 TO 9070
	18:00 - 22:30	4.50	DRL	1	DRILL FROM 9070 TO 9171
	22:30 - 23:30	1.00	DRL	1	SPR AND CONNECTIONS FOR BOTH TOURS
	23:30 - 06:00	6.50	DRL	1	DRILL FROM 9171 TO 9310 - VERY AMAZED AS THIS BIT OUT DRILLING NEW BIT FROM OFFSET AT THIS DEPTH
8/3/2008	06:00 - 17:00	11.00	DRL	1	DRILL FROM 9310 TO 9575
	17:00 - 18:00	1.00	RIG	1	SERVICE RIG AND TOP DRIVE
	18:00 - 22:30	4.50	DRL	1	DRILL FROM 9575 TO 9656 - STARTED WT. UP MUD TO 9.4 DUE TO BG GAS, STARTED LOSING MUD AT 30 BBLS PER HOUR, LOST 90 BBLS, LOWERED STROKES AND PUMPED LCM SWEEPS, WE HAVE IT SLOWED DOWN, AT 9650 HAD HIGH TORQUE WITH HIGH PSI SPIKE, SET BACK ON BOTTOM HAD

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Operations Summary Report

Well Name: WV 15D-23-8-21

Location: 23- 8-S 21-E 8

Rig Name: UNIT

Spud Date: 6/9/2008

Rig Release: 9/5/2008

Rig Number: 109

Date	From - To	Hours	Code	Sub Code	Description of Operations
8/3/2008	18:00 - 22:30	4.50	DRL	1	ALL PSI, PREPARE FOR TRIP OUT, NOT WORRIED ON BIT BUT WORRIED ON MM.
	22:30 - 23:30	1.00	CIRC	1	CIRCULATE BOTTOMS UP FOR SURVEY
	23:30 - 00:00	0.50	SUR	1	DROP SURVEY
	00:00 - 01:00	1.00	CIRC	1	CIRCULATE BOTTOMS UP FROM SURVEY TIME WHILE BUILDING PILL AND FILLING TRIP TANK
	01:00 - 01:30	0.50	CIRC	1	SPOT 120 BBLS OF 18% LCM AND PUMP TRIP SLUG
	01:30 - 03:30	2.00	TRP	10	TRIP OUT FOR BIT, ONE TIGHT SPOT 3RD STAND FROM BOTTOM, PULLED RIGHT THRU
	03:30 - 04:00	0.50	BOP	1	PULL RT HEAD
	04:00 - 06:00	2.00	TRP	10	TRIP TO BHA FOR INSPECTION, WILL CHANGE OUT DRILLING JARS AND MM - BIT
8/4/2008	06:00 - 08:00	2.00	TRP	10	TRIP BHA OUT AS INSPECTORS ARE LATE - FUNCTION ALL BOP EQUIPMENT AS PER BLM REQUIREMENTS
	08:00 - 09:00	1.00	TRP	1	HANDLE BHA - CHANGE OUT MM, BIT AND JARS
	09:00 - 09:30	0.50	CIRC	1	SURFACE TEST MM
	09:30 - 15:00	5.50	ISP	1	INSPECT DC AND 44 HWDP - ALL OK
	15:00 - 17:00	2.00	TRP	2	TRIP TO SHOE
	17:00 - 17:30	0.50	BOP	1	INSTALL RT. HEAD
	17:30 - 18:00	0.50	CIRC	1	CIRCULATE OUT TRIP SLUG AT SHOE
	18:00 - 19:00	1.00	TRP	2	TRIP TO 7700 FEET
	19:00 - 19:30	0.50	CIRC	1	FILL PIPE AND CIRCULATE MUD UP HOLE FOR 10 MINUTES
	19:30 - 20:30	1.00	TRP	2	TRIP TO TWO STANDS FROM BOTTOM -
	20:30 - 21:30	1.00	REAM	1	WASH AND REAM 180' TO BOTTOM - TIGHT SPOT AT 9568
	21:30 - 22:30	1.00	RIG	1	SERVICE RIG AND TOP DRIVE WHILE CIRCULATING BOTTOMS UP
	22:30 - 06:00	7.50	DRL	1	DRILL FROM 9656 TO 9941 - HOPEFULLY START SNEAKING UP ON YOU KNOW WHO. STARTED LOSING MUD AT 9915, SWEEPING HOLE WITH 15% LCM AND TREATING HOURLY - NOW LOSING 30 BBLS PER HOUR
					DRILL FROM 9941 TO 10140
8/5/2008	06:00 - 18:00	12.00	DRL	1	DRILL FROM 10140 TO 10157
	18:00 - 18:30	0.50	DRL	1	SPR AND CONNECTIONS FOR BOTH CREWS
	18:30 - 19:30	1.00	DRL	1	DRILL FROM 10157 TO 10345
	19:30 - 04:00	8.50	DRL	1	SERVICE RIG AND TOP DRIVE
	04:00 - 05:00	1.00	RIG	1	DRILL FROM 10345 TO 10375 LOSING MUD AT 12 TO 15 BBLS PER HOUR - MUD WT IS NOW 9.85 - HOLE IS VERY SENSITIVE LIKE ME. #1 SHAKER STILL BYPASSED, 1% LCM IN SYSTEM, RUNNING ALL SOLIDS CONTROL, WILL CLEAN SAND TRAP THIS AM AND POSSIBLY SHAKER TANK - WILL START BUILDING REPLACEMENT MUD IN PILL TANK
	05:00 - 06:00	1.00	DRL	1	DRILL FROM 10375 TO 10468
8/6/2008	06:00 - 10:30	4.50	DRL	1	SERVICE RIG AND TOP DRIVE
	10:30 - 11:30	1.00	RIG	1	CLEAN SHALE AND SHAKER TANKS DUE TO HAVING ONE SHAKER BYPASSED
	11:30 - 12:30	1.00	LOC	7	DRILL FROM 10468 TO 10589
	12:30 - 18:00	5.50	DRL	1	DRILL FROM 10589 TO 10652
	18:00 - 20:00	2.00	DRL	1	CHANGE OUT KELLY JOINT - SPR AND CONNECTIONS FOR BOTH CREWS
	20:00 - 21:00	1.00	DRL	1	DRILL FROM 10652 TO 10850 - NO LOSSES LAST 4.5 HOURS - MUD WT. NOW 9.9 -
	21:00 - 06:00	9.00	DRL	1	DRILL FROM 10850 TO 10962
					SLOW PUMP RATES AND CONNECTIONS - CHANGE OUT KELLY JOINT
8/7/2008	06:00 - 13:00	7.00	DRL	1	DRILL FROM 10962 TO 11023
	13:00 - 14:00	1.00	DRL	1	SERVICE RIG AND TOP DRIVE
	14:00 - 16:00	2.00	DRL	1	DRILL FROM 11023 TO 11040
	16:00 - 17:00	1.00	RIG	1	DRILL FROM 11040 TO 11133
	17:00 - 18:00	1.00	DRL	1	
	18:00 - 01:30	7.50	DRL	1	

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Operations Summary Report

Well Name: WV 15D-23-8-21

Location: 23- 8-S 21-E 8

Rig Name: UNIT

Spud Date: 6/9/2008

Rig Release: 9/5/2008

Rig Number: 109

Date	From - To	Hours	Code	Sub Code	Description of Operations
8/7/2008	01:30 - 02:30	1.00	SUR	1	DROP SURVEY - SURVEY DEPTH = 11040 - LAY TWO JOINTS FROM STRING DOWN WHILE WAITING ON SURVEY
	02:30 - 03:30	1.00	CIRC	1	CIRCULATE BOTTOMS UP FROM SURVEY TIME
	03:30 - 04:00	0.50	CIRC	1	PUMP 120BBLs OF 1# OVER RCD PILL WITH 15% LCM - TOP OFF WITH TRIP SLUG
	04:00 - 06:00	2.00	TRP	10	TRIP OUT OF HOLE - AT 0430 WE AT 9500' - SEGO CAME IN AT 11023 - BIT SLOWED IN BUCK TONGUE JUST ABOVE CASTLE GATE
8/8/2008	06:00 - 06:30	0.50	TRP	10	TRIP TO SHOE
	06:30 - 07:00	0.50	BOP	1	PULL RT. HEAD
	07:00 - 09:00	2.00	TRP	10	FINISH TRIP OUT
	09:00 - 10:00	1.00	TRP	1	CHANGE OUT MM AND BIT
	10:00 - 10:30	0.50	CIRC	1	SURFACE TESI MM
	10:30 - 12:30	2.00	TRP	2	TRIP BHA IN AND CIRCULATE FOR FIVE MINUTES, TRIP TO 3500' AND CIRCULATE FOR TEN MINUTES
	12:30 - 13:30	1.00	RIG	1	SERVICE RIG AND TOP DRIVE, ALSO REPAIR AIR LEAD IN LOW DRUM CLUTCH
	13:30 - 14:30	1.00	TRP	2	TRIP TO SHOE
	14:30 - 15:00	0.50	BOP	1	INSTALL RT. HEAD
	15:00 - 16:30	1.50	RIG	6	CUT DRILL LINE
	16:30 - 17:00	0.50	CIRC	1	CIRCULATE BOTTOMS UP AT SHOE
	17:00 - 18:00	1.00	TRP	2	TRIP INTO HOLE TO 8200 AND CIRCULATE FOR 20 MINUTES
	18:00 - 20:30	2.50	TRP	2	TRIP TO ONE STAND FROM BOTTOM
	20:30 - 22:00	1.50	REAM	1	SAFETY WASH AND REAM 81' TO BOTTOM, 2 FEET OF FILL, CIRCULATE OUT GAS
8/9/2008	22:00 - 06:00	8.00	DRL	1	DRILL FROM 11133 TO 11275 - CASTLEGATE CAME IN AT 11154 - BLACKHAWK SHOULD COME IN AT 11454 LEAVING TD AROUND 12000' - RUSS WILL BE HERE TODAY - MUD WT IS NOW 10.75 AND WILL STAY THERE UNTIL MORE IS NEEDED
	06:00 - 10:30	4.50	DRL	1	DRILL FROM 11275 TO 11331
	10:30 - 11:00	0.50	DRL	1	KELLY JOINT - SPR AND CONNECTIONS
	11:00 - 17:00	6.00	DRL	1	DRILL FROM 11331 TO 11424
	17:00 - 18:00	1.00	RIG	1	SERVICE RIG AND TOP DRIVE
	18:00 - 02:30	8.50	DRL	1	DRILL FROM 11484 TO 11518 - AT 11450 TOOK ON WATER FLOW FROM CASTLE GATE (90 BBLs) BIT SLOWED AND TORQUED WITH PSI SPIKE
	02:30 - 03:30	1.00	CIRC	1	CIRCULATE BOTTOMS UP FOR TRIP
	03:30 - 04:00	0.50	CIRC	1	SPOT LCM ECD PILL AND TRIP SLUG
	04:00 - 06:00	2.00	TRP	10	TRIP OUT FOR BIT - STARTED PICKING EXTRA TORQUE AND PSI SPIKE - WE ARE JUST IN TO THE BLACKHAWK EQUIVLENT WHICH CAME IN AT 11480
	06:00 - 06:30	0.50	TRP	10	TRIP OUT TO SHOE
8/10/2008	06:30 - 07:00	0.50	BOP	1	PULL RT HEAD
	07:00 - 09:00	2.00	TRP	10	FINISH TRIP OUT
	09:00 - 10:00	1.00	TRP	1	DRAIN AND LD MM AND BIT - BIT RING OUT - CLEAN FLOOR - PICK UP SAME
	10:00 - 10:30	0.50	CIRC	1	SURFACE TEST MM
	10:30 - 13:30	3.00	TRP	2	TRIP BHA AND DRILL PIPE TO SHOE - FILL AND CIRC. AT BHA - 2500' AND 5200
	13:30 - 14:00	0.50	BOP	1	CHANGE AND INSTALL RT. HEAD
	14:00 - 14:30	0.50	CAV	1	CIRCULATE OUT TRIP SLUG AT SHOE
	14:30 - 17:00	2.50	TRP	2	TRIP IN TO HOLE - BREAK CIRC. AT 8500'
	17:00 - 18:00	1.00	REAM	1	SAFETY WASH AND REAM 90' TO BOTTOM - STAGE PUMPS UP TO DRILLING GALLONS
	18:00 - 19:00	1.00	RIG	1	SERVICE RIG AND TOP DRIVE
	19:00 - 06:00	11.00	DRL	1	DRILL FROM 11518 TO 11775 - BLACKHAWK D GAVE NICE GAS POP WITH 40'

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Operations Summary Report

Well Name: WV 15D-23-8-21

Location: 23- 8-S 21-E 8

Rig Name: UNIT

Spud Date: 6/9/2008

Rig Release: 9/5/2008

Rig Number: 109

Date	From - To	Hours	Code	Sub Code	Description of Operations
8/10/2008	19:00 - 06:00	11.00	DRL	1	FLARE BUT WILL STAY WITH 10.7 MUD WT. KENNELWORTH COMING NEXT AT 11880 WITH OUR NEXT POSSIBLE LOSS ZONE AT 11950 - 8' DRILLING FLARE ON BUSTER
8/11/2008	06:00 - 07:30	1.50	DRL	1	DRILL FROM 11775 TO 11797
	07:30 - 08:00	0.50	DRL	1	CHANGE OUT KELLY JOINT AND SLOW PUMP RATES
	08:00 - 12:30	4.50	DRL	1	DRILL FROM 117978 TO 11858
	12:30 - 13:30	1.00	RIG	1	SERVICE RIG AND TOP DRIVE
	13:30 - 18:00	4.50	DRL	1	DRILL FROM 11858 TO 11925
	18:00 - 20:00	2.00	DRL	1	DRILL FROM 11925 TO 11978 - LOST PARTIAL RETURNS AT 11960, GOT BACK TO FULL WITH SWEEP - KEPT DRILLING AND LOST FULL RETURNS - GO TO SLOW PUMP RATE AND ALL 18 % LCM FROM PREMIX TANK - BYPASS BOTH SHAKERS
	20:00 - 00:30	4.50	CIRC	2	LOST FULL RETURNS - PUMP 20% LCM DOWN HOLE, REGAIN SOME CIRCULATION - BUILD VOLUME - LOST 625 AT FIRST
	00:30 - 04:30	4.00	DRL	1	DRILL FROM 11978 TO 12042 - LOST ANOTHER 67 BBLS - HOLDING AT PRESENT
	04:30 - 05:30	1.00	CIRC	1	CIRCULATE BOTTOMS UP FOR SHORT TRIP
	05:30 - 06:00	0.50	TRP	14	SHORT TRIP 20 STANDS
8/12/2008	06:00 - 07:30	1.50	TRP	14	SHORT TRIP 15 STANDS OUT AND IN - HOLE OK
	07:30 - 08:00	0.50	SUR	1	DROP SURVEY
	08:00 - 10:00	2.00	CIRC	1	CIRCULATE BOTTOMS UP AND SPOT LCM-ECD PILL ALONG WITH TRIP SLUG
	10:00 - 14:00	4.00	TRP	2	START TRIP OUT FOR LOGS - STRAP OUT
	14:00 - 14:30	0.50	BOP	1	PULL RT. HEAD
	14:30 - 17:30	3.00	TRP	2	FINISH TRIP OUT - LAST 3 STANDS WET
	17:30 - 18:00	0.50	TRP	1	DRAIN MM - LD BIT - PULL SURVEY TOOL
	18:00 - 18:30	0.50	BOP	1	PULL WEAR BUSHING
	18:30 - 19:30	1.00	LOG	1	HOLD SAFETY MEETING - RIG UP LOGGING ADAPTER AND LOGGERS
	19:30 - 00:30	5.00	LOG	1	RUN LOGS IN - LOGS STOPPED AT 7356 - PULL OUT AND ATTEMPT SLICK RUN WITH NO LUCK
	00:30 - 01:00	0.50	LOG	1	RIG DOWN LOGGERS
	01:00 - 02:00	1.00	RIG	1	SERVICE RIG AND TOP DRIVE
	02:00 - 02:30	0.50	RIG	8	CHANGE OUT LOAD CELL ON TORQUE UNIT
	02:30 - 05:00	2.50	TRP	2	PICK UP BHA AND TRIP TO 3500' - FILL AT 600 - 1700 - AND CIRC.
	05:00 - 05:30	0.50	CIRC	1	KELLY UP AND CIRC. HOLE
8/13/2008	05:30 - 06:00	0.50	TRP	2	TRIP IN TO HOLE SLOWLY - NOT OVER 20% FLOW ON WAY IN
	06:00 - 06:30	0.50	BOP	1	INSTALL RT. HEAD AT SHOE
	06:30 - 07:00	0.50	CIRC	1	CIRCULATE BOTTOMS UP AT SHOE
	07:00 - 08:30	1.50	TRP	2	STAGE IN TO HOLE
	08:30 - 09:00	0.50	REAM	1	SEEN TIGHT SPOT WHERE LOGGERS DID AT 7345 - WENT RIGHT THRU - WORKED A FEW TIMES - OK
	09:00 - 11:30	2.50	TRP	2	TRIP IN TO HOLE TO
	11:30 - 13:00	1.50	REAM	1	WASH AND REAM TWO DIFFERANT SPOTS AT 7915 AND 11870 - BOTH VERY SOFT - WASHED AND REAMED THE WHOLE STANDS
	13:00 - 14:30	1.50	CIRC	1	CIRCULATE TWO BOTTOMS UP AND CONDITION MUD
	14:30 - 15:00	0.50	CIRC	1	SPOT LCM, ECD AND TRIP SLUG
	15:00 - 18:00	3.00	TRP	2	TRIP OUT FOR LOGS - NO TIGHT SPOTS YET
	18:00 - 21:00	3.00	TRP	2	FINISH TRIP OUT
	21:00 - 21:30	0.50	LOG	1	HOLD SAFETY MEETING AND RIG UP LOGGERS
	21:30 - 06:00	8.50	LOG	1	LOG OPEN HOLE - FIRST RUN OK - AT 0500 WILL BE ON BOTTOM WITH LAST RUN - TOTAL GAIN IN TRIP TANK IS AT PRESENT WITH WIRE LINE CLOSE TO BOTTOM = 10.10 BBLS - 0500 SECOND RUN TAGGES BOTTOM AND IS NOW 800' FROM BOTTOM LOGGING UP
8/14/2008	06:00 - 08:00	2.00	LOG	1	FINISH LOGS

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Operations Summary Report

Well Name: WV 15D-23-8-21
 Location: 23- 8-S 21-E 8
 Rig Name: UNIT

Spud Date: 6/9/2008
 Rig Release: 9/5/2008
 Rig Number: 109

Date	From - To	Hours	Code	Sub Code	Description of Operations
8/14/2008	08:00 - 08:30	0.50	LOG	1	RIG LOGGERS DOWN
	08:30 - 09:30	1.00	RIG	1	SERVICE RIG AND TOP DRIVE
	09:30 - 12:30	3.00	TRP	2	TRIP BHA AND PIPE TO SHOE
	12:30 - 13:00	0.50	BOP	1	INSTALL RT HEAD
	13:00 - 13:30	0.50	CIRC	1	CIRCULATE BOTTOMS UP
	13:30 - 16:30	3.00	TRP	2	TRIP TO BOTTOM - FILL AND CIRCULATE EVERY 25 STANDS
	16:30 - 17:00	0.50	REAM	1	SAFETY WASH AND REAM TO BOTTOM - NO FILL
	17:00 - 18:00	1.00	CIRC	1	CIRCULATE AND CONDITION MUD FOR LDDP AND RUNNING OF CASING
	18:00 - 19:30	1.50	CIRC	1	CIRCULATE AND CONDITION MUD - BOTTOMS UP = 3000 UNITS GAS ON BUSTER WITH 36 BBL GAIN AND 35' FLARE
	19:30 - 20:00	0.50	CIRC	1	HOLD SAFETY MEETING WITH LD CREW, PUMP AND SPOT LCM, ECD AND TRIP SLUG
	20:00 - 21:00	1.00	TRP	2	TRIP FIVE STANDS OUT AND RIG LD CREW
	21:00 - 04:30	7.50	TRP	3	LDDP
	04:30 - 05:00	0.50	BOP	1	PULL RT. HEAD
	05:00 - 06:00	1.00	TRP	3	LDDP AND POSSIBLY START ON BHA - AT 0500 WE ARE AT 2000'
8/15/2008	06:00 - 07:30	1.50	TRP	1	FINISH LD OF STRING
	07:30 - 08:30	1.00	RIG	7	CLEAN RIG FLOOR AND HOLD SAFETY MEETING WITH ALL CREWS
	08:30 - 09:30	1.00	CSG	1	RIG UP CASING CREW
	09:30 - 18:00	8.50	CSG	2	RUN CASING - CREEP CASING IN TO HOLE - DID NOT HELP - LOST RETURNS TWICE TO 2200' THEN WE LOST IT FOR GOOD AT 3300' - BUILD 600 BBLs TO MAKE IT TO BOTTOM - BACKSIDE STAYS FULL BUT LOSE ALL CAP. AND DISP. GOING IN TO HOLE THEN FILL PIPE AND 30 STROKES EXTRA EVERY 700' TO FLOATS OPEN
	18:00 - 21:30	3.50	CSG	2	FINISH RUNNING CASING - CIRCULATE LAST TWO JOINTS DOWN
	21:30 - 22:00	0.50	CSG	2	CIRCULATE AND LAND LANDING JOINT - NO RETURNS
	22:00 - 22:30	0.50	CIRC	1	RIG UP CIRCULATION HOSE FOR PUMPING 25 STROKES EVERY 20 MINUTES SO WE DONT PLUG FLOATS
	22:30 - 23:30	1.00	CSG	1	RIG DOWN CASING CREW
	23:30 - 03:00	3.50	CMT	1	PACK OFF WELLHEAD - TEST TO 9000 PSI - SET CEMENT ISOLATION TOOL - FILL STACK AND CLOSE BAG
	03:00 - 03:30	0.50	CMT	1	RIG UP CEMENTERS AND HOLD SAFETY MEETING
8/16/2008	03:30 - 06:00	2.50	CMT	1	WAIT ON HALLIBURTON AS N2 TRUCK LOST ALL HYDRAULICS - WAITING ON TRUCK FROM VERNAL OR ROCKSPRINGS - EVERY 20 MIN. WE ARE PUMPING 20 STROKES TO KEEP FLOATS OPEN FROM LCM - COULD BE WAITING ANYWHERE FROM 3 TO 7 HOURS FOR REPLACEMENT TRUCK
	06:00 - 06:30	0.50	CMT	1	CHANGE OUT SAVER SUB - RESET TOP DRIVE PSI FOR 4" PIPE WHILE WAITING ON HALLIBURTON
	06:30 - 07:00	0.50	CMT	1	HELD SAFETY MEETING WITH CEMENTERS
	07:00 - 13:00	6.00	CMT	2	PRESSURE TEST LINE TO 6000 PSI - 50 BBL SPACER AT 5 BPM - 30 BBLs SCAVENGER CEMENT AT 5 BPM - LEAD = 150 BBLs AT 5 BPM - 2ND LEAD = 380 BBLs AT 5 BPM - TAIL = 54 BBLs AT 5 BPM - DROP PLUG - DISPLACE WITH FRESH WATER MUD (10.75) - PSI = 1024 - BUMP PLUG TO 1550 - HOLD FOR 1/2 HOUR - FLOAT HELD - PUMP CAP = 55 BBLs AT 3 BPM - 3 BBLs WATER DISP. - START CAP PSI = 600 - FINISH CAP PSI = 460
	13:00 - 14:00	1.00	CMT	1	RIG DOWN CEMENTERS
	14:00 - 17:30	3.50	LOC	7	START CLEANING PITS - START CHANGING OUT KOOMEY REMOTE CORD, OLD ONE HAS ELEVEN SPLICES - CHANGE OUT QUICK RELEASE ON LOW DRUM CLUTCH - CHANGE OUT PONY ROD SEALS ON #2 PUMP - CHANGE OUT PUMP ON HIGH SPEED CENT. - HAVE WELDER REPAIR ADGITATOR BLADES ON #4
	17:30 - 18:00	0.50	BOP	2	RIG UP TESTER WHILE STILL CLEANING TANKS
	18:00 - 06:00	12.00	BOP	2	TEST BOP'S - HAVE TRIED 3 DIFFERANT TEST PLUGS AND NONE WILL TEST

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Operations Summary Report

Well Name: WV 15D-23-8-21
 Location: 23- 8-S 21-E 8
 Rig Name: UNIT

Spud Date: 6/9/2008
 Rig Release: 9/5/2008
 Rig Number: 109

Date	From - To	Hours	Code	Sub Code	Description of Operations
8/16/2008	18:00 - 06:00	12.00	BOP	2	- STACK IS SPIT CLEAN - TAKE TEST PLUG AND WRAP TEFLON IN SEAL GROOVE, STREACH NEW SEAL OVER PLUG AND SET - NOW HOLDING, CONTINUE WITH TEST - FINISHED CLEANING PITS AT 2200. CHANGE OUT ALL GUN LINE VALVES (12) - SOLIDS CONTROL HOOKED UP, RESERVE PIT WILL BE BLOCKED OF BY 0800, TESTERS DONE BY 0800, WILL INSTALL WEAR BUSHING AND START PICKING UP BHA IN A COUPLE OF HOURS - WILL NOW BE ABLE TO RUN OILBASE MUD OVER SHAKERS BEFORE GOING TO MUD TANKS - SEAL GATES ON MUD TANKS FOR OIL BASE MUD - THE FIRST TESTER AND BOTH DRILLERS DID NOT KNOW WHICH WAY TO RUN TEST PLUG, TESTER GONE, 3 REPLACEMENTS SHOWED UP
8/17/2008	06:00 - 07:30	1.50	BOP	1	FINISH ALL BOP TESTING
	07:30 - 08:00	0.50	BOP	1	INSTALL WEAR BUSHING - FINISH GELLING GATES
	08:00 - 09:00	1.00	RIG	1	SERVICE RIG AND TOP DRIVE - START FILLING MUD TANKS WITH OILBASE MUD OVER SHAKER SCREEN
	09:00 - 10:30	1.50	CSG	1	HOLD SAFETY MEETING AND RIG UP LD CREW
	10:30 - 11:00	0.50	TRP	1	PICK UP BIT AND MM AND DRY TURN WITH ROTARY TABLE
	11:00 - 16:00	5.00	TRP	1	START PICKING UP BHA AND DRILL PIPE
	16:00 - 17:30	1.50	RIG	2	REPAIR OIL LEAK ON TOP DRIVE
	17:30 - 18:00	0.50	TRP	1	PICK UP DRILL PIPE
	18:00 - 23:30	5.50	TRP	1	PICK UP DRILL PIPE
	23:30 - 00:00	0.50	CSG	1	RIG DOWN LD MACHINE
	00:00 - 00:30	0.50	BOP	1	INSTALL RT HEAD
	00:30 - 03:00	2.50	DRL	4	TAGGED LIGHT CEMENT AT 11865 - DISPLACE WATER BASE MUD WITH OIL BASE MUD WHILE SAFETY WASH AND REAM TO SHOE WHICH CAME IN 4' EARLY DUE TO CASING MAKE UP
	03:00 - 04:00	1.00	BOP	1	USED RT. RUBBER ELEMENT LEAKING - CHANGE RT. HEAD UNITS
	04:00 - 05:00	1.00	DRL	4	FINISH DRILLING OUT SHOE TRACK
8/18/2008	05:00 - 05:30	0.50	EQT	2	FIT - 15.5 EQUIVLENT - OK
	05:30 - 06:00	0.50	RIG	2	RIG REPAIR - BROKEN FUEL HOSE TO TOP DRIVE
	06:00 - 07:30	1.50	RIG	2	REPAIR AND REPLACE RETURN FUEL LINE ON TOP DRIVE
	07:30 - 14:00	6.50	DRL	1	DRILL FROM 12042 TO 12212
	14:00 - 15:00	1.00	RIG	1	SERVICE RIG AND TOP DRIVE
	15:00 - 16:00	1.00	CIRC	1	CIRCULATE OUT GAS FROM ABERDEEN - 45 BBL GAIN WITH 60' FLARE
	16:00 - 18:00	2.00	DRL	1	DRILL FROM 12212 TO 12265
	18:00 - 23:30	5.50	DRL	1	DRILL FROM 12265 TO 12375
	23:30 - 00:30	1.00	CIRC	1	SLOW PUMP RATES AND CONNECTIONS FOR BOTH CREWS
	00:30 - 06:00	5.50	DRL	1	DRILL FROM 12375 TO 12545 - CONNECTIONS CREATE 60' FLARES - LEAVING MUD WT ALONE - WILL BUILD 160 BBLs VOLUME TODAY - ABERDEEN HAD 45 BBL GAIN WITH 65' FLARE - THE MUD WE GOT FROM SST 66 WE HAVE KNOCKED LOW GRAVITYS FROM 8.4 TO 4.0 - NEED TO GET SUPER SUCKERS TO CLEAN EMPTY OIL BASE TANKS AS MUD HAD EXTRA MATERIAL THAT WE CAN NOT USE. LOST 85 BBLs CLEANING UP THERE MUD, WILL REBILL THEM ON MATERIAL TRANSFER
8/19/2008	06:00 - 14:30	8.50	DRL	1	DRILL FROM 12545 TO 12794
	14:30 - 15:30	1.00	RIG	1	SERVICE RIG AND TOP DRIVE
	15:30 - 18:00	2.50	DRL	1	DRILL FROM 12794 TO 12870
	18:00 - 01:00	7.00	DRL	1	DRILL FROM 12870 TO 13085
	01:00 - 02:00	1.00	CIRC	1	SPR AND CONNECTIONS FOR BOTH CREWS
	02:00 - 06:00	4.00	DRL	1	DRILL FROM 13085 TO 13215 - MUD WT. A COUPLE TENTHS HIGH BUT GIVES ME A SAFETY CUSHION WITH MY DRILLERS - SHOULD BE ABLE TO HOLD ALL THRU MANCOS B - BUILT 200 BBLs OF SPARE OIL BASE MUD - WILL CLEAN OIL BASE TANKS THIS AM
8/20/2008	06:00 - 13:00	7.00	DRL	1	DRILL FROM 13215 TO 13448

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Operations Summary Report

Well Name: WV 15D-23-8-21

Location: 23- 8-S 21-E 8

Rig Name: UNIT

Spud Date: 6/9/2008

Rig Release: 9/5/2008

Rig Number: 109

Date	From - To	Hours	Code	Sub Code	Description of Operations
8/20/2008	13:00 - 13:30	0.50	OTH		WORK ON PASON AUTO DRILLER UNIT
	13:30 - 14:30	1.00	DRL	1	DRILL FROM 13448 TO 13473
	14:30 - 15:30	1.00	RIG	1	SERVICE RIG AND TOP DRIVE
	15:30 - 18:00	2.50	DRL	1	DRILL FROM 13473 TO 13538
	18:00 - 19:30	1.50	DRL	1	DRILL FROM 13538 TO 13570
	19:30 - 20:00	0.50	CIRC	1	CIRCULATE OUT GAS - 55' FLARE W/ 29 BBL GAIN
	20:00 - 00:30	4.50	DRL	1	DRILL FROM 13570 TO 13667
	00:30 - 01:30	1.00	CIRC	1	SPR AND CONNECTIONS
	01:30 - 06:00	4.50	DRL	1	DRILL FROM 13667 TO 13790 - CONNECTIONS = 4000 UNITS WITH 35' FLARE, 9 BBL GAINS - BACKGROUND = 3000 UNITS WITH 3-5' FLARE - TRYING TO HOLD 14.8 MUD WT. TO WEAR OUT SANDS AND HOLD FOR TD. - CLEANED OUT OIL BASE TANKS WITH SUPER SUCKERS,
8/21/2008	06:00 - 09:00	3.00	DRL	1	DRILL FROM 13790 TO 13861
	09:00 - 10:00	1.00	RIG	1	SERVICE RIG AND TOP DRIVE
	10:00 - 18:00	8.00	DRL	1	DRILL FROM 13861 TO 14050
	18:00 - 00:00	6.00	DRL	1	DRILL FROM 14050 TO 14159
	00:00 - 01:00	1.00	CIRC	1	SPR AND CONNECTIONS FOR BOTH CREWS
	01:00 - 02:00	1.00	CIRC	1	TRY TO WORK TOOL JOINT THRU RT. HEAD AND TRY TO GET BIT TO DRILL - NO LUCK
	02:00 - 03:30	1.50	CIRC	1	CIRCLATE HOLE CLEAN WHILE BUILDING ECD PILL AND TRIP SLUG
	03:30 - 04:00	0.50	CIRC	1	SPOT ECD AND TRIP SLUG FOR TRIP OUT
8/22/2008	04:00 - 06:00	2.00	TRP	12	TRIP OUT FOR MM AND BIT - WILL DO WIRELINE FOR CEMENT ON THIS TRIP OUT
	06:00 - 06:30	0.50	TRP	12	TRIP OUT
	06:30 - 07:00	0.50	BOP	1	PULL RT HEAD
	07:00 - 11:00	4.00	TRP	12	FINISH TRIP OUT AND LD MM AND BIT
	11:00 - 11:30	0.50	OTH		CLEAN FLOOR
	11:30 - 12:30	1.00	LOG	2	HOLD SAFETY MEETING AND RIG UP LOGGERS FOR CBL
	12:30 - 15:30	3.00	LOG	2	LOG HOLE
	15:30 - 16:30	1.00	LOG	2	RIG LOGGERS DOWN
	16:30 - 17:30	1.00	RIG	1	SERVICE RIG AND TOP DRIVE
	17:30 - 18:00	0.50	CIRC	1	SURFACE TEST MM - OK
	18:00 - 21:00	3.00	TRP	2	TRIP IN TO HOLE FILLING EVERY 2500' AND CIRCULATING FOR 10 MIN. TO 9000'
	21:00 - 21:30	0.50	BOP	1	INSTALL RT. HEAD
	21:30 - 22:00	0.50	CIRC	1	CIRCULATE 1400 STROKES
	22:00 - 23:00	1.00	TRP	2	TRIP TO SHOE
	23:00 - 00:30	1.50	RIG	6	CUT DRILL LINE
	00:30 - 02:00	1.50	TRP	2	TRIP TO 95' FROM BOTTOM
	02:00 - 02:30	0.50	REAM	1	SAFETY WASH AND REAM TO BOTTOM - NO FILL
	02:30 - 04:00	1.50	CIRC	1	TAG BOTTOM AND CIRCULATE OUT GAS - 75' FLARE ON CHOKE - 210 PSI ON CASING
	04:00 - 06:00	2.00	DRL	1	DRILL FROM 14159 TO 14249 - THIS MOTOR MUCH STRONGER
	06:00 - 11:00	5.00	DRL	1	DRILL F/ 14249'-14442', WOB- 6/8K, RPM- 145 COMBINED, GPM- 214, MW- 14.8, VIS- 42, BG GAS- 850u THRU BUSTER, CONN GAS- 2750u WITH 25' FLARE, NO LOSSES
8/23/2008	11:00 - 12:00	1.00	RIG	1	LUBRICATE RIG & TOP DRIVE, FUNCTION ANNULAR & COM
	12:00 - 06:00	18.00	DRL	1	DRILL F/ 14442'-15200', WOB- 6/10K, RPM- 145 COMBINED, GPM- 214, MW- 14.7+, VIS- 41, BG GAS- 870u, CONN GAS- 3120u WITH 30' FLARE, NO LOSSES
	06:00 - 11:30	5.50	DRL	1	DRILL F/ 15200'-15412', WOB- 6/10K, RPM- 145 COMBINED, GPM- 214, MW- 14.8, VIS- 41, BG GAS- 450U, CONN GAS- 1400u WITH 20' FLARE, NO LOSSES
	11:30 - 12:30	1.00	RIG	1	LUBRICATE RIG & TOP DRIVE, FUNCTION HCR & COM
8/24/2008	12:30 - 17:30	5.00	DRL	1	DRILL F/ 15412'-15605' DRLG WITH SAME PARAMETERS MW & VIS, NO

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Printed: 11/26/2008 1:24:04 PM

Operations Summary Report

Well Name: WV 15D-23-8-21

Location: 23- 8-S 21-E 8

Rig Name: UNIT

Spud Date: 6/9/2008

Rig Release: 9/5/2008

Rig Number: 109

Date	From - To	Hours	Code	Sub Code	Description of Operations
8/24/2008	12:30 - 17:30	5.00	DRL	1	LOSSES
	17:30 - 18:30	1.00	CIRC	1	CIRC. OUT GAS KICK @ 15605'- 30 BBL GAIN WITH 35' FLARE
	18:30 - 06:00	11.50	DRL	1	DRILL F/ 15605'-16060', WOB- 8/10K, RPM- 145 COMBINED, GPM- 214, MW- 14.8, VIS- 42, BG GAS- 600u, CONN GAS- 1660u WITH 15' FLARE, NO LOSSES
8/25/2008	06:00 - 06:30	0.50	DRL	1	DRILL F/ 16060'-16065', WOB- 4/10K, RPM- 120-145 COMBINED, GPM- 195-214, MW- 14.8, VIS- 42, BG GAS- 450u. MUD MOTOR GETTING WEAK, PRESSURED UP & STALLED 3 TIMES
	06:30 - 08:00	1.50	CIRC	1	CIRC & BUILD ECD PILL & TRIP SLUG
	08:00 - 09:00	1.00	SUR	1	DROP SURVEY & CHECK FOR FLOW (FLOWING 1.5 BBL/HR)
	09:00 - 10:00	1.00	CIRC	1	SPOT 50 BBL (16.3 PPG) ECD PILL ON BOTTOM & PUMP TRIP SLUG
	10:00 - 12:00	2.00	TRP	12	TRIP OUT TO 12406'
	12:00 - 13:30	1.50	CIRC	1	CIRC. BOTTOMS UP, SPOT 120 BBL (16.3 PPG) ECD PILL & PUMP TRIP SLUG
	13:30 - 14:00	0.50	TRP	12	PULL ROT. HEAD ELEMENT
	14:00 - 18:00	4.00	TRP	12	TRIP OUT F/ MUD MOTOR FAILURE & BIT
	18:00 - 19:00	1.00	RIG	1	LUBRICATE RIG & TOP DRIVE
	19:00 - 00:30	5.50	RIG	2	TOP DRIVE REPAIR- REPLACE CONTROL MODULE FOR LINK TILT
	00:30 - 02:00	1.50	TRP	12	TRIP OUT BHA, HOLE FILL 22 BBLs OVER CALCULATED
	02:00 - 03:00	1.00	TRP	12	BREAK BIT & CHANGE OUT MUD MOTORS, FUNCTIONED BLIND RAMS
	03:00 - 03:30	0.50	TRP	12	SURFACE TEST MUD MOTOR
	03:30 - 06:00	2.50	TRP	12	TRIP IN, BREAK CIRC. AFTER BHA, THEN EVERY 3000'
8/26/2008	06:00 - 08:30	2.50	TRP	12	TRIP IN TO CSG SHOE @ 12050'
	08:30 - 10:00	1.50	CIRC	1	CIRC. OUT ECD PILL & GAS
	10:00 - 11:30	1.50	TRP	12	TRIP IN TO 15700'
	11:30 - 18:30	7.00	REAM	1	REAM F/ 15700'-16065'
	18:30 - 20:00	1.50	DRL	1	ATTEMPT TO DRILL, UNABLE TO GET ANY DIFFERENTIAL PRESSURE OR REACTIVE TORQUE, SUSPECT BROKEN DRIVE SHAFT IN MUD MOTOR
	20:00 - 21:30	1.50	CIRC	1	CIRC. BOTTOMS UP & MIX ECD PILL & TRIP SLUG
	21:30 - 03:30	6.00	REAM	1	BACK REAM OUT OF HOLE F/ 16065'-14540'
	03:30 - 05:00	1.50	CIRC	1	CIRC. BOTTOMS UP
	05:00 - 06:00	1.00	CIRC	1	SPOT 60 BBL ECD PILL @ 16.3 PPG
	06:00 - 07:30	1.50	TRP	12	TRIP OUT USING PIPE SPINNERS TO 12030' (MUD MOTOR FAILURE)
	07:30 - 09:00	1.50	CIRC	1	CIRC. BOTTOMS UP & SPOT 100 BBL ECD PILL @ 16.3 PPG
	09:00 - 09:30	0.50	TRP	12	PULL ROT. HEAD ELEMENT
	09:30 - 16:30	7.00	TRP	12	TRIP OUT USING PIPE SPINNERS F/ MUD MOTOR FAILURE
	16:30 - 17:00	0.50	TRP	1	BREAK BIT & LAY DOWN MUD MOTOR (FOUND STATOR RUBBER IN BIT)
	17:00 - 18:00	1.00	RIG	1	LUBRICATE RIG & TOP DRIVE, FUNCTIONED BLIND RAMS & CLEAN RIG FLOOR
8/27/2008	18:00 - 19:00	1.00	TRP	1	MAKE UP & SURFACE TEST TORQUE BUSTER
	19:00 - 23:00	4.00	TRP	12	TRIP IN TO CSG SHOE @ 12020', BREAK CIRC. EVERY 3000'
	23:00 - 23:30	0.50	TRP	12	INSTALL ROT. HEAD ELEMENT
	23:30 - 00:30	1.00	RIG	6	CUT DRLG LINE & RESET COM
	00:30 - 02:00	1.50	CIRC	1	CIRC OUT ECD PILL & GAS
	02:00 - 04:30	2.50	TRP	12	TRIP IN TO 15970'
	04:30 - 05:00	0.50	REAM	1	WASH 90' TO BOTTOM WITH NO FILL
	05:00 - 06:00	1.00	DRL	1	DRILL F/ 16065'-16075', WOB- 8/12K, RPM- 65, GPM- 214, MW- 15, VIS- 44, BG GAS- 20u
8/28/2008	06:00 - 19:00	13.00	DRL	1	DRILL F/ 16075'-16190', WOB- 8/14K, RPM- 55/70, GPM- 214, MW- 15, VIS- 41, BG GAS-360u, CONN GAS- 2900u WITH 30' FLARE, NO LOSSES
	19:00 - 20:00	1.00	RIG	1	LUBRICATE RIG & TOP DRIVE, FUNCTION HCR & COM
	20:00 - 02:30	6.50	DRL	1	DRILL F/ 16190'-16220', WOB- 12/18K, RPM- 55/65, GPM- 214, MW- 15, VIS- 41, BG GAS- 650u, CONN GAS- 2560u WITH 30' FLARE, NO LOSSES
	02:30 - 03:30	1.00	CIRC	1	CIRC., MIX TRIP SLUG & FILL TRIP TANK
	03:30 - 04:30	1.00	CIRC	1	SPOT 60 BBL ECD PILL, 1.5 PPG OVER & PUMP TRIP SLUG

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Operations Summary Report

Well Name: WV 15D-23-8-21
 Location: 23- 8-S 21-E 8
 Rig Name: UNIT

Spud Date: 6/9/2008
 Rig Release: 9/5/2008
 Rig Number: 109

Date	From - To	Hours	Code	Sub Code	Description of Operations
8/28/2008	04:30 - 06:00	1.50	TRP	10	TRIP OUT F/ BIT
8/29/2008	06:00 - 06:30	0.50	TRP	10	TRIP OUT TO 12500'
	06:30 - 08:00	1.50	CIRC	1	CIRC BOTTOMS UP & SPOT 120 BBL ECD PILL 1.5 PPG OVER
	08:00 - 08:30	0.50	TRP	10	PULL ROT. HEAD ELEMENT
	08:30 - 14:00	5.50	TRP	10	TRIP OUT, HOLE FILL 19 BBLS OVER CALCULATED
	14:00 - 14:30	0.50	TRP	1	BREAK BIT & LAY DOWN TORQUE BUSTER, FUNCTIONED BLIND RAMS
	14:30 - 15:00	0.50	TRP	1	PICK UP & SURFACE TEST MUD MOTOR
	15:00 - 16:00	1.00	TRP	10	TRIP IN BHA & CHANGE OUT JARS
	16:00 - 20:00	4.00	TRP	10	TRIP IN TO 12000', BREAK CIRC. EVERY 3000'
	20:00 - 20:30	0.50	TRP	10	INSTALL ROT. HEAD ELEMENT
	20:30 - 21:30	1.00	RIG	1	LUBRICATE RIG & TOP DRIVE
	21:30 - 22:30	1.00	CIRC	1	CIRC. OUT ECD PILL & GAS
	22:30 - 00:30	2.00	TRP	10	TRIP IN TO 16100'
	00:30 - 01:30	1.00	REAM	1	WASH 120' TO BOTTOM & PATTERN BIT (NO FILL)
	01:30 - 06:00	4.50	DRL	1	DRILL F/ 16220'-16240', WOB- 3/5, RPM- 504 COMBINED, GPM- 205, MW- 15.1, VIS- 44, BG GAS- 260u, TRIP GAS- 2700u WITH 40' FLARE, NO LOSSES
8/30/2008	06:00 - 08:00	2.00	DRL	1	DRILL F/ 16240'-16248', WOB- 3/5K, RPM- 500 COMBINED, GPM- 205, MW- 15.1, VIS- 43, BG GAS- 120u, NO LOSSES
	08:00 - 14:00	6.00	RIG	2	RIG REPAIR- #2 & 3 GENERATORS WENT DOWN, WAIT ON ELECTRICIAN & MECHANIC. FOUND BROKEN WIRES FOR TEMP. SENSOR ON #3 MOTOR. FOUND LOOSE WIRING IN #2 GENERATOR BAY
	14:00 - 14:30	0.50	DRL	1	DRILL F/ 16248'-16252', DRLG WITH SAME PARAMETERS
	14:30 - 15:30	1.00	RIG	2	#2 GENERATOR WENT DOWN AGAIN. UNDER VOLTAGE RELEASE CARD ON MAIN BREAKER IS BAD. ELECTRICIAN IS TRYING TO LOCATE A CARD. WILL DRILL WITH 2 GENERATORS.
	15:30 - 00:00	8.50	DRL	1	DRILL F/ 16252'-16282', WOB- 3/7K, RPM- 504 COMBINED, GPM- 205, MW- 15, VIS- 42, BG GAS- 420u, NO LOSSES
	00:00 - 01:00	1.00	RIG	1	LUBRICATE RIG & TOP DRIVE, FUNCTION TOP PIPE RAMS & COM
	01:00 - 06:00	5.00	DRL	1	DRILL F/ 16282'-16298', WOB- 4/7K, RPM- 520 COMBINED, GPM- 214, MW- 15, VIS- 42, BG GAS- 250u, CONN GAS- 1950u WITH 30' FLARE, NO LOSSES
8/31/2008	06:00 - 04:00	22.00	DRL	1	DRILL F/ 16298'-16383', WOB- 1/6K, RPM- 520 COMBINED, GPM- 214, MW- 15, VIS- 41, BG GAS- 380u, CONN GAS- 1920u WITH 20' FLARE, NO LOSSES
	04:00 - 05:00	1.00	RIG	1	LUBRICATE RIG & TOP DRIVE, FUNCTION LOWER PIPE RAMS & COM
	05:00 - 06:00	1.00	DRL	1	RESTART BIT 5 TMES DUE TO STALLS LAST 24 HRS (BIT STUCK @ 16357', PULLED 30K OVER TO FREE BIT.)
9/1/2008	06:00 - 12:00	6.00	DRL	1	DRILL F/ 16383'-16398' (TD) WOB- 4/6K, RPM- 520 COMBINED, GPM- 214, MW- 15, VIS- 42, BG GAS- 380u, SEEPING 3 BBLS/HR
	12:00 - 13:30	1.50	CIRC	5	CIRC. BOTTOMS UP SAMPLE
	13:30 - 14:30	1.00	TRP	14	SHORT TRIP 10 STDS
	14:30 - 17:00	2.50	CIRC	1	CIRC. BOTTOMS UP, SPOT 60 BBL ECD PILL @ 16.5 PPG & PUMP TRIP SLUG
	17:00 - 19:00	2.00	TRP	2	TRIP OUT 40 STDS
	19:00 - 20:30	1.50	CIRC	1	CIRC. BOTTOMS UP, SPOT 120 BBL ECD PILL @ 16.5 PPG & PUMP TRIP SLUG
	20:30 - 21:00	0.50	TRP	2	PULL ROT. HEAD ELEMENT
	21:00 - 00:00	3.00	TRP	2	TRIP OUT F/ LOGS
	00:00 - 01:00	1.00	CIRC	1	PIPE CAME WET, DROP BALL & OPEN CIRC. SUB, PUMP 10 BBL TRIP SLUG
	01:00 - 02:30	1.50	TRP	2	TRIP OUT F/ LOGS, HOLE FILL 22 BBLS OVER CALCULATED
	02:30 - 03:30	1.00	TRP	1	BREAK BIT, LAY DOWN MUD MOTOR & CIRC. SUB, CLEAN FLOOR, FUNCTIONED BLIND RAMS
	03:30 - 05:00	1.50	LOG	1	HOLD SAFETY MEETING & RIG UP SCHLUMBERGER LOGGING TOOLS
	05:00 - 06:00	1.00	LOG	1	LOGGING- 1ST RUN PLATFORM EXPRESS
9/2/2008	06:00 - 19:30	13.50	LOG	1	LOGGING WITH SCHLUMBERGER, 1ST LOG- PLATFORM EXPRESS F/ 16398'-12025', HIT SEVERAL TIGHT SPOTS LOGGING OUT TO 13500' , 2ND LOG- OIL BASE MICRO IMAGING F/ 13500'-12025', MONITOR WELL USING TRIP

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Operations Summary Report

Well Name: WV 15D-23-8-21

Location: 23- 8-S 21-E 8

Rig Name: UNIT

Spud Date: 6/9/2008

Rig Release: 9/5/2008

Rig Number: 109

Date	From - To	Hours	Code	Sub Code	Description of Operations
9/2/2008	06:00 - 19:30	13.50	LOG	1	TANK- NO LOSSES OR GAINS.
	19:30 - 20:30	1.00	LOG	1	RIG DOWN LOGGING TOOLS
	20:30 - 01:00	4.50	TRP	15	MAKE UP BIT, BIT SUB & TRIP IN TO CSG SHOE, BREAK CIRC. EVERY 3000'
	01:00 - 01:30	0.50	TRP	15	INSTALL ROT. HEAD ELEMENT
	01:30 - 02:30	1.00	RIG	6	CUT DRLG LINE & RESET COM
	02:30 - 03:30	1.00	RIG	1	LUBRICATE RIG & TOP DRIVE
	03:30 - 05:00	1.50	CIRC	1	TRIP IN 8 STDS & CIRC. OUT ECD PILL @ 12560'
9/3/2008	05:00 - 06:00	1.00	TRP	15	TRIP IN TO 15500'
	06:00 - 06:30	0.50	TRP	15	TRIP IN TO 16330'
	06:30 - 07:00	0.50	REAM	1	WASH 68' TO BOTTOM, NO FILL
	07:00 - 10:00	3.00	CIRC	1	CIRC. & CONDITION MUD, LOWER MW FROM 15.2 TO 15, VIS- 44
	10:00 - 11:30	1.50	CIRC	1	SPOT 50 BBL ECD PILL 1.5 PPG OVER & PUMP TRIP SLUG
	11:30 - 13:00	1.50	TRP	2	TRIP OUT 40 STDS
	13:00 - 15:00	2.00	CIRC	1	CIRC. BOTTOMS UP, SPOT 80 BBL ECD PILL 1.5 PPG OVER & PUMP TRIP SLUG (HELD SAFETY MEETING WITH LAY DOWN CREW & RIGGED UP LAY DOWN MACHINE)
	15:00 - 22:00	7.00	TRP	3	LAY DOWN DP
	22:00 - 23:30	1.50	TRP	2	RIG DOWN LAY DOWN POLE & TRIP IN 40 STDS
	23:30 - 03:00	3.50	TRP	3	RIG UP LAY DOWN POLE & LAY DOWN DP
	03:00 - 03:30	0.50	TRP	1	PULL ROT. HEAD ELEMENT
	03:30 - 05:00	1.50	TRP	1	LAY DOWN BHA
	05:00 - 06:00	1.00	TRP	1	PULL WEAR BUSHING
	06:00 - 06:30	0.50	RIG	7	HOLD SAFETY MEETING WITH ROCKY MTN. CSG CREW & LAY DOWN CREW
9/4/2008	06:30 - 09:00	2.50	CSG	1	RIG UP CSG CREW
	09:00 - 19:00	10.00	CSG	2	RUN 4.5" CSG, FILL PIPE & BREAK CIRC. EVERY 2000'
	19:00 - 19:30	0.50	CSG	2	INSTALL ROT. HEAD ELEMENT
	19:30 - 20:30	1.00	CIRC	1	CIRC. OUT ECD PILL & GAS @ 12560'
	20:30 - 23:30	3.00	CSG	2	RUN 4.5" CSG, FILL PIPE & BREAK CIRC. EVERY 1500'
	23:30 - 00:00	0.50	REAM	1	WASH 90' TO BOTTOM
	00:00 - 02:30	2.50	CIRC	1	CIRC. BOTTOMS UP
	02:30 - 03:30	1.00	CMT	1	RIG DOWN FILL TOOL & RIG UP CEMENT HEAD
	03:30 - 05:00	1.50	CIRC	1	CIRC. BOTTOMS UP, GPM- 195, MW- 14.8, VIS- 44
	05:00 - 06:00	1.00	CMT	2	HOLD SAFETY MEETING WITH HALLIBURTON CEMENTERS & PRESSURE TEST LINE TO 12K
	06:00 - 08:00	2.00	CMT	2	CEMENT 4.5" CSG WITH 700 SX OF MOUNTAIN "G" CEMENT, PLUG PUMPED, FLOATS HELD & HAD FULL RETURNS THRU OUT JOB. ESTIMATED TOP OF CEMENT @ 5500'
	08:00 - 10:00	2.00	CMT	1	RIG DOWN CEMENTERS
	10:00 - 16:00	6.00	LOC	7	TRANSFER OBM TO TANK FARM & START CLEANING MUD TANKS, FLUSH STACK, MUD LINES, CHOKE LINES & GASBUSTER WITH FRESH WATER & OPTICLEAN
9/5/2008	16:00 - 00:00	8.00	BOP	1	NIPPLE DOWN BOP, RIG UP BOP LIFT, PICK STACK & SET SLIPS @ 165k STRING WT. & CUT OFF CSG, SET STACK DOWN & RIG DOWN BOP LIFT.
	00:00 - 06:00	6.00	LOC	4	CLEAN & RIG DOWN FLOOR, FINISH CLEANING MUD TANKS, RIG RELEASED @ 0:600

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Operations Summary Report - COMPLETION

Well Name: WV 15D-23-8-21
 Location: 23- 8-S 21-E 8
 Rig Name: UNIT

Spud Date: 6/9/2008
 Rig Release: 9/5/2008
 Rig Number: 109

Date	From - To	Hours	Code	Sub Code	Description of Operations
9/12/2008	06:00 - 14:00	8.00	LOG	2	MIRU LONE WOLF ELU. MU AND RIH WITH CCL/GR/CBL/VDL LOGGING TOOLS. LOG FROM PBTD @ 16,364' TO 3,800' WHILE HOLDING 4,000 PSI. FC @ 16,393' (BHT 294'). TOC EST @ 5,500'. CMT LOOKED GOOD FROM PBTD TO 8,150', MARGINAL CMT TO 5,500'. RDMO ELU.
9/17/2008	14:30 - 17:00	2.50	WHD	2	NU 4 1/16" 15K FRAC TREE, SCHOONER HCR AND STINGER FRAC HEAD. SET WORK STAND. PRESSURE TEST 4 1/2" CSG TO 10,000 PSI. TEST 4 1/2" X 7" ANNULUS TO 3,000 PSI. BOTH TESTS GOOD.
9/20/2008	08:00 - 12:35	4.58	PERF	2	MIRU OWP ELU. MU & RIH WITH 2.5" GUNS. SHOOT 18 HOLES FROM 16,357' TO 16,368'. 500 PSI WHEN GUNS WERE FIRED. 1,200 PSI WITH GUNS AT SURFACE.
	12:35 - 13:00	0.42	STIM	1	MIRU HES EQUIPMENT AND PUMP 10 BBLS BREAK DOWN TEST. OPEN WELL WITH 780 PSI. BREAK PERFS DOWN @ 7.9 BPM & 8,376 PSI. PUMPED 7.9 BPM @ 7,925 PSI INTO PERFS. ISIP= 7,150 PSI. 5 MIN= 6,773 PSI. 10 MIN= 6,701 PSI. 15 MIN= 6,661. PUMPED A TOTAL OF 18 BBLS.
	13:00 - 06:00	17.00	PTST	2	MONITOR PRESSURE WITH HES QUARTZ GUAGES.
9/21/2008	06:00 - 07:30	1.50	STIM	3	FRAC STAGE #1 WITH 1,153 BBLS 35# HYBOR-G CARRYING 24,776 LBS# 30/60 SINTERLITE SAND. AVG RATE= 29.0 BPM. AVG PSI= 11,449.
	07:30 - 10:30	3.00	PERF	2	PERF STG #2 WITH 6- 2' & 2- 1' GUN LOADED 3 SPF, 120° PHASE, 11 GRAM CHARGE. SET 3.44" CFP AT 16,270' WITH 7,200 PSI. SHOOT 42 HOLES FROM 15,613' TO 16,234'.
	10:30 - 12:20	1.83	STIM	3	FRAC STAGE #2 WITH 2,908 BBLS SLICKWATER CARRYING 49,185 LBS# 30/60 SINTERLITE SAND. AVG RATE= 36.9 BPM. AVG PSI= 10,350.
	12:20 - 14:45	2.42	PERF	2	PERF STG #3 WITH 6- 2' & 2- 1' GUN LOADED 3 SPF, 120° PHASE, 11 GRAM CHARGE. SET 3.44" CBP AT 15,530' WITH 8,000 PSI. SHOOT 42 HOLES FROM 14,799' TO 15,508'.
	14:45 - 16:30	1.75	STIM	3	FRAC STAGE #3 WITH 2,476 BBLS SLICKWATER CARRYING 41,700 LBS# 30/60 SINTERLITE SAND. AVG RATE= 29.4 BPM. AVG PSI= 10,517.
	16:30 - 19:00	2.50	PERF	2	PERF STG #4 WITH 7- 2' GUN LOADED 3 SPF, 120° PHASE, 11 GRAM CHARGE. SET 3.44" CFP AT 14,720' WITH 7,900 PSI. SHOOT 42 HOLES FROM 14,126' TO 14,695'.
9/22/2008	19:00 - 06:00	11.00	WOT	4	SDFN
	07:00 - 08:50	1.83	STIM	3	FRAC STAGE #4 WITH 2,163 BBLS SLICKWATER CARRYING 31,745 LBS# 30/60 SINTERLITE SAND. AVG RATE= 24.4 BPM. AVG PSI= 11,251. SCREENED OUT AFTER 1.25 PPA STAGE. PLACED 29,375 LBS# SAND INTO FORMATION.
	08:50 - 11:30	2.67	CIRC	3	OPEN CSG TO TANK WITH 12/64" CHOKE & 7,400 PSI. FLOWED BACK 265 BBLS FLUID TIL SAND CLEANED UP. LOADED HOLE WITH 210 BBLS WATER AT 11 BPM AND 8,920 PSI. CONTINUE ON WITH NEXT STAGE.
	11:30 - 13:30	2.00	PERF	2	PERF STG #5 WITH 3- 2' & 2- 4' GUN LOADED 3 SPF, 120° PHASE, 11 GRAM CHARGE. SET 3.44" CBP AT 14,020' WITH 7,800 PSI. SHOOT 42 HOLES FROM 13,553' TO 14,011'.
	13:30 - 15:00	1.50	STIM	3	FRAC STAGE #5 WITH 2,492 BBLS SLICKWATER CARRYING 46,677 LBS# 30/60 SINTERLITE SAND. AVG RATE= 41.7 BPM. AVG PSI= 9,067.
	15:00 - 17:00	2.00	PERF	2	PERF STG #6 WITH 2- 2' & 2- 4' GUN LOADED 3 SPF, 120° PHASE, 11 GRAM CHARGE. SET 3.44" CFP AT 13,430' WITH 7,000 PSI. SHOOT 36 HOLES FROM 13,153' TO 13,418'.
	17:00 - 18:30	1.50	STIM	3	FRAC STAGE #6 WITH 2,654 BBLS SLICKWATER CARRYING 37,655 LBS# 30/60 SINTERLITE SAND. AVG RATE= 39.6 BPM. AVG PSI= 10,020.
	18:30 - 20:30	2.00	PERF	2	PERF STG #7 WITH 7- 2' GUN LOADED 3 SPF, 120° PHASE, 11 GRAM CHARGE. SET 3.44" CFP AT 13,090' WITH 7,000 PSI. SHOOT 42 HOLES FROM 12,400' TO 13,066'.
9/23/2008	20:30 - 06:00	9.50	WOT	4	SDFN
	06:00 - 07:15	1.25	STIM	3	FRAC STAGE #7 WITH 2,485 BBLS SLICKWATER CARRYING 49,118 LBS# 30/60 SINTERLITE SAND. AVG RATE= 38.9 BPM. AVG PSI= 7,687.

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DEC 04 2008

Printed: 11/26/2008 1:23:54 PM

DIV. OF OIL, GAS & MINING

Operations Summary Report

Well Name: WV 15D-23-8-21
 Location: 23- 8-S 21-E 8
 Rig Name: UNIT

Spud Date: 6/9/2008
 Rig Release: 9/5/2008
 Rig Number: 109

Date	From - To	Hours	Code	Sub Code	Description of Operations
9/23/2008	07:15 - 09:00	1.75	PERF	2	PERF STG #8 WITH 3- 2' & 1- 4' GUN LOADED 3 SPF, 120° PHASE, 11 GRAM CHARGE. SET 3.44" CFP AT 12,370' WITH 5,700 PSI. SHOOT 30 HOLES FROM 11,648' TO 12,347'.
	09:00 - 10:30	1.50	STIM	3	FRAC STAGE #8 WITH 2,483 BBLS SLICKWATER CARRYING 47,245 LBS# 30/60 SINTERLITE SAND. AVG RATE= 44.2 BPM. AVG PSI= 7,494.
	10:30 - 12:00	1.50	PERF	2	PERF STG #9 WITH 11- 1' GUN LOADED 3 SPF, 120° PHASE, 11 GRAM CHARGE. SET 3.44" CBP AT 11,130' WITH 4,800 PSI. SHOOT 33 HOLES FROM 10,820' TO 11,118'.
	12:00 - 13:30	1.50	STIM	3	FRAC STAGE #9 WITH 2,963 BBLS SLICKWATER CARRYING 71,140 LBS# 30/50 SB EXCEL SAND. AVG RATE= 46.4 BPM. AVG PSI= 6,257.
	13:30 - 14:50	1.33	PERF	2	PERF STG #10 WITH 9- 1' GUN LOADED 3 SPF, 120° PHASE, 11 GRAM CHARGE. SET 3.44" CFP AT 10,716' WITH 3500 PSI. SHOOT 27 HOLES FROM 10,243' TO 10,698'.
	14:50 - 16:00	1.17	STIM	3	FRAC STAGE #10 WITH 2,952 BBLS SLICKWATER CARRYING 71,516 LBS# 30/50 SB EXCEL SAND. AVG RATE= 51.5 BPM. AVG PSI= 6,899.
	16:00 - 17:30	1.50	PERF	2	PERF STG #11 WITH 7- 2' GUN LOADED 3 SPF, 120° PHASE, 11 GRAM CHARGE. SET 3.44" CFP AT 8,380' WITH 3,400 PSI. SHOOT 18 HOLES FROM 6,413' TO 8,368'.
	17:30 - 18:30	1.00	STIM	3	FRAC STAGE #11 WITH 800 BBLS DELTA-200 FLUID CARRYING 59,953 LBS# 30/50 SB EXCEL SAND. AVG RATE= 51.5 BPM. AVG PSI= 5,940.
	18:30 - 22:00	3.50			RDMO HES & OWP ELU.
	22:00 - 06:00	8.00	WOT	4	SDFN
9/24/2008	06:00 - 20:00	14.00	LOC	4	MIRU IPS CTU, GCDOE AND SPIRIT FLUIDS. LOAD CT WITH 60° WATER. MU QES 2 7/8" MOTOR/JARS AND 3.55" 5-BLADE JUNK MILL. TEST STACK TO 8,000 PSI. RIH AND DRILL OUT 10 PLUGS IN 5 HOURS TO PBTD DEPTH OF 16,393'. PUMP FINAL SWEEP AND POOH. RDMO IPS CTU, GCDOE & SPIRIT FLUIDS.
	20:00 - 06:00	10.00	PTST	2	FLOWING TO SALES THROUGH IPS FBE.
9/25/2008	06:00 - 06:00	24.00	PTST	2	FLOWING TO SALES THROUGH IPS FBE.
9/26/2008	06:00 - 06:00	24.00	PTST	2	FLOWING TO SALES THROUGH IPS FBE.
9/27/2008	06:00 - 06:00	24.00	PTST	2	FLOWING TO SALES THROUGH IPS FBE.
9/28/2008	06:00 - 06:00	24.00	PTST	2	FLOWING TO SALES THROUGH IPS FBE.
9/29/2008	06:00 - 08:00	2.00	PTST	2	FLOWING TO SALES THROUGH IPS FBE. RD IPS FBE.
	08:00 - 06:00	22.00	PTST	2	TURN WELL OVER TO PRODUCTION

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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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FORM 3160-5
Expires: July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

5. Lease Serial No. **UTU-025963**
6. If Indian, Allottee or Tribe Name
UTE TRIBE

SUBMIT IN TRIPLICATE – Other instructions on page 2.

1. Type of Well
☐ Oil Well ☒ Gas Well ☐ Other
2. Name of Operator
QUESTAR EXPLORATION & PRODUCTION CO. CONTACT: **Mike Stahl**
3a. Address
11002 EAST 17500 SOUTH, VERNAL, UTAH 84078
3b. Phone No. (include area code)
(303) 308-3613
4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
668' FSL 1994' FEL, SWSE, SECTION 23, T8S, R21E
7. If Unit of CA/Agreement, Name and/or No.
N/A
8. Well Name and No.
WV 15D-23-8-21
9. API Well No.
43-047-39664
10. Field and Pool or Exploratory Area
NATURAL BUTTES
11. Country or Parish, State
UINTAH, UTAH

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other COMMINGLING
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

In Compliance with the Administrative Utah code for drilling and operating practice R649-3-22, completion into two or more pools. Questar Exploration & Production Company hereby requests the commingling of production between intervals in the WV 15D-23-8-21. Questar considers this commingling to be in the public interest in that it promotes maximum ultimate economic recovery, prevents waste, provides for orderly and efficient production of oil and gas and presents no detrimental effects from commingling the gas streams.

Questar requests approval for the commingling of production of the Dakota and Wasatch intervals. Based upon offset production logs, the proposed initial allocation is as follows: Dakota - 20% ; Mancos - 15% ; Mesa Verde - 40% ; Wasatch - 25%.

On an annual basis the gas will be sampled and a determination will be made of the BTU content and gas constituents. These annual samples can be used to determine if the gas allocation is changing over time. If these samples do not indicate that any adjustments in allocation are necessary they may be discontinued after the fifth anniversary of the initial production.

COPY SENT TO OPERATOR

Date: **4.14.2009**

Initials: **KS**

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)
Laura Bills
Title **Associate Regulatory Affairs Analyst**
Signature **Laura Bills**
Date **03/12/2009**

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by **[Signature]** Title **Pet-Eng.** Date **4/13/09**
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Office **Doon** Federal Approval of This Action Is Necessary

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and with intent to defraud, any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

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MAR 16 2009

DIV. OF OIL, GAS & MINING

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AFFIDAVIT OF NOTICE

STATE OF COLORADO)
) ss:
COUNTY OF DENVER)

Nathan C. Koeniger, being duly sworn, deposes and says:

1. That I am employed by Questar Exploration and Production Company in the capacity as a Landman. My business address is:

Independence Plaza
1050 17th Street, Suite 500
Denver, CO 80265

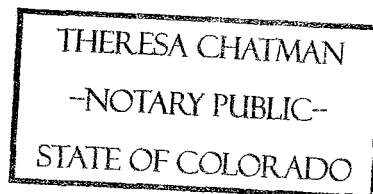
2. In my capacity as a Landman, pursuant to the provisions of Utah Administrative Rule 649-3-22, I have provided a copy of Questar Exploration and Production Company's application for completion of the WV 15D-23-8-21 well into two or more pools, in the form of Utah Division of Oil, Gas and Mining's Form 9 Sundry Notice, to owners of all contiguous oil and gas leases or drilling units overlying the pools which are the subject of that application.
3. In my capacity as a Landman, I am authorized to provide such notice of Questar Exploration and Production Company's application to contiguous owners and to make this affidavit on this 4th day of March 2009.

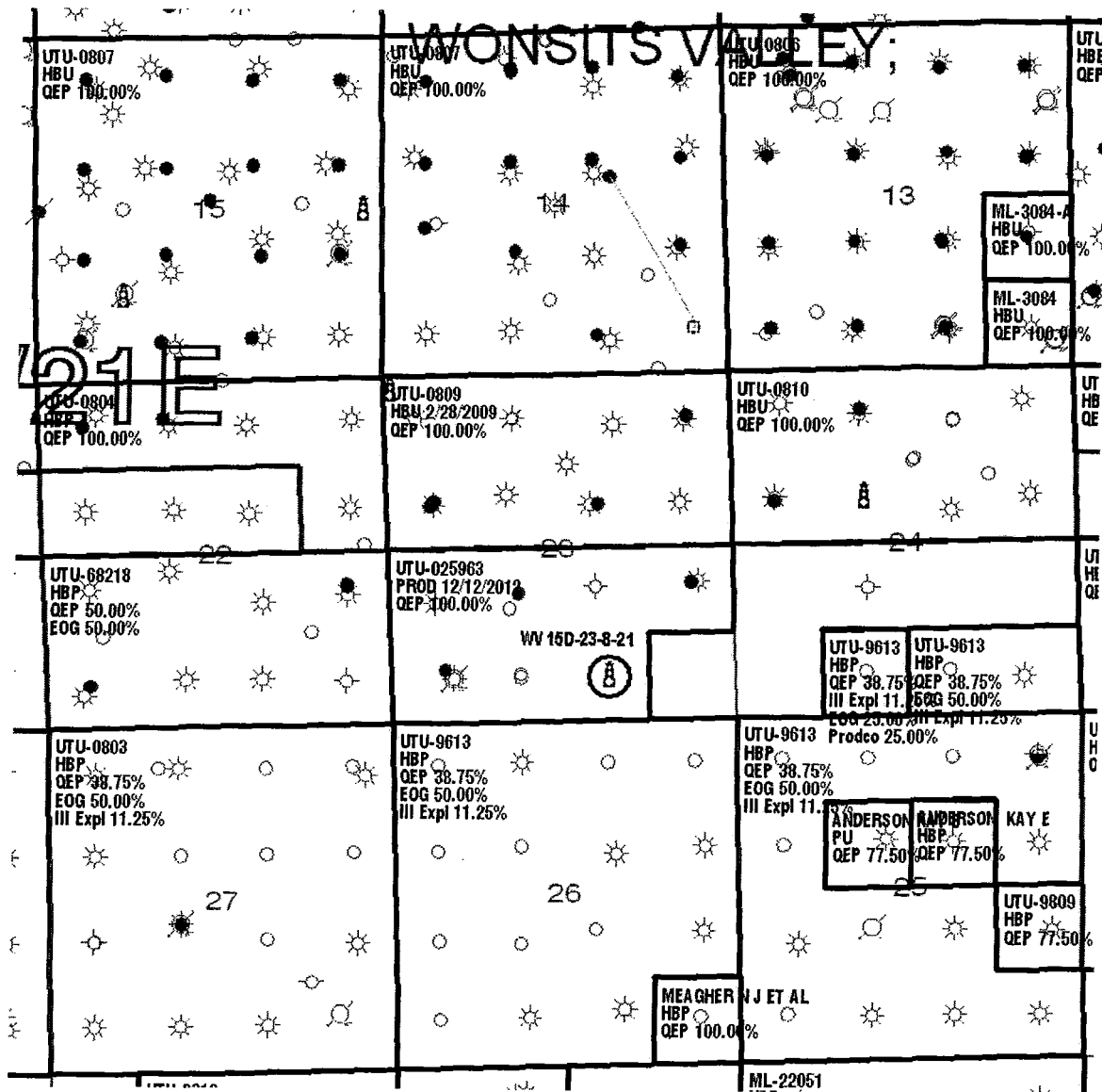

Printed Name: Nathan C. Koeniger

The foregoing instrument was sworn to and subscribed before me this 4th day of March 2009, by Nathan C. Koeniger.


Notary Public

MY COMMISSION EXPIRES: 7/7/11





○ Commingled well

Tw / Kmv
COMMINGLED PRODUCTION

Uinta Basin—Uintah County, Utah

Well: WV 15D-23-8-21
Lease: UTU 025963

QUESTAR
Exploration and
Production

1050 17th St., # 500 Denver, CO 80205

Geologist:

Landman: Chad Matney

Date: September 16, 2008

ENTITY ACTION FORM - FORM 6

OPERATOR: Questar Exploration & Production Co.
ADDRESS: 11002 East 17500 South
Vernal, Utah 84078 (435)781-4342

OPERATOR ACCT. No. N-5085

Action Code	Current Entity No.	New Entity No.	API Number	Well Name	QQ	SC	TP	RG	County	Spud Date	Effective Date
E	16924	16924	43-047-39664	WV 15D 23 8 21	SWSE	23	8S	21	Uintah	6/6/08	3/1/09

WELL 1 COMMENTS: WMMFD

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4/14/09

WELL 2 COMMENTS:

WELL 3 COMMENTS:

WELL 4 COMMENTS:


WELL 5 COMMENTS:

ACTION CODES (See instructions on back of form)

- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (explain in comments section)

NOTE: Use COMMENT section to explain why each Action Code was selected

(3/89)


Signature

Office Administrator 4/10/09
Title Date

Phone No. (435)781-4342

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DIV. OF OIL, GAS & MINING

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Division of Oil, Gas and Mining
OPERATOR CHANGE WORKSHEET (for state use only)

ROUTING
 CDW

Change of Operator (Well Sold)

X - Operator Name Change

The operator of the well(s) listed below has changed, effective:

6/14/2010

FROM: (Old Operator): N5085-Questar Exploration and Production Company 1050 17th St, Suite 500 Denver, CO 80265 Phone: 1 (303) 308-3048	TO: (New Operator): N3700-QEP Energy Company 1050 17th St, Suite 500 Denver, CO 80265 Phone: 1 (303) 308-3048
--	---

CA No.

Unit:

WELL NAME	SEC	TWN	RNG	API NO	ENTITY NO	LEASE TYPE	WELL TYPE	WELL STATUS
SEE ATTACHED								

OPERATOR CHANGES DOCUMENTATION

Enter date after each listed item is completed

- (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 6/28/2010
- (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 6/28/2010
- The new company was checked on the **Department of Commerce, Division of Corporations Database** on: 6/24/2010
- 4a. Is the new operator registered in the State of Utah: Business Number: 764611-0143
- 5a. (R649-9-2)Waste Management Plan has been received on: Requested
- 5b. Inspections of LA PA state/fee well sites complete on: n/a
- 5c. Reports current for Production/Disposition & Sundries on: ok
- Federal and Indian Lease Wells:** The BLM and or the BIA has approved the merger, name change, or operator change for all wells listed on Federal or Indian leases on: BLM 8/16/2010 BIA not yet
- Federal and Indian Units:**
The BLM or BIA has approved the successor of unit operator for wells listed on: 8/16/2010
- Federal and Indian Communization Agreements ("CA"):**
The BLM or BIA has approved the operator for all wells listed within a CA on: N/A
- Underground Injection Control ("UIC")** Division has approved UIC Form 5 Transfer of Authority to **Inject**, for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: 6/29/2010

DATA ENTRY:

- Changes entered in the **Oil and Gas Database** on: 6/30/2010
- Changes have been entered on the **Monthly Operator Change Spread Sheet** on: 6/30/2010
- Bond information entered in RBDMS on: 6/30/2010
- Fee/State wells attached to bond in RBDMS on: 6/30/2010
- Injection Projects to new operator in RBDMS on: 6/30/2010
- Receipt of Acceptance of Drilling Procedures for APD/New on: n/a

BOND VERIFICATION:

- Federal well(s) covered by Bond Number: ESB000024
- Indian well(s) covered by Bond Number: 965010693
- 3a. (R649-3-1) The **NEW** operator of any state/fee well(s) listed covered by Bond Number 965010695
- 3b. The **FORMER** operator has requested a release of liability from their bond on: n/a

LEASE INTEREST OWNER NOTIFICATION:

- (R649-2-10) The **NEW** operator of the fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: n/a

COMMENTS:

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER _____		5. LEASE DESIGNATION AND SERIAL NUMBER: See attached
2. NAME OF OPERATOR: Questar Exploration and Production Company <i>N5085</i>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: See attached
3. ADDRESS OF OPERATOR: 1050 17th Street, Suite 500 CITY Denver STATE CO ZIP 80265 PHONE NUMBER: (303) 672-6900		7. UNIT or CA AGREEMENT NAME: See attached
4. LOCATION OF WELL FOOTAGES AT SURFACE: See attached COUNTY: Attached QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: STATE: UTAH		8. WELL NAME and NUMBER: See attached
		9. API NUMBER: Attached
		10. FIELD AND POOL, OR WILDCAT: See attached

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA			
TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: <u>6/14/2010</u>	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: <u>Operator Name Change</u>
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Effective June 14, 2010 Questar Exploration and Production Company changed its name to QEP Energy Company. This name change involves only an internal corporate name change and no third party change of operator is involved. The same employees will continue to be responsible for operations of the properties described on the attached list. All operations will continue to be covered by bond numbers:

Federal Bond Number: 965002976 (BLM Reference No. ESB000024) *N3700*

Utah State Bond Number: ~~965003033~~

Fee Land Bond Number: ~~965003033~~ *965010695*

BIA Bond Number: ~~799446~~ *965010693*

The attached document is an all inclusive list of the wells operated by Questar Exploration and Production Company. As of June 14, 2010 QEP Energy Company assumes all rights, duties and obligations as operator of the properties as described on the list

NAME (PLEASE PRINT) <u>Morgan Anderson</u>	TITLE <u>Regulatory Affairs Analyst</u>
SIGNATURE <i>Morgan Anderson</i>	DATE <u>6/23/2010</u>

(This space for State use only)

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JUN 28 2010

DIV. OF OIL, GAS & MINING

(See Instructions on Reverse Side)

APPROVED *6/30/2009*

Earlene Russell
Division of Oil, Gas and Mining
Earlene Russell, Engineering Technician

Questar Exploration Production Company (N5085) to QEP Energy Company (N3700)
effective June 14, 2010

well_name	sec	tpw	rng	api	entity	mineral lease	type	stat	C
WEST RIVER BEND 3-12-10-15	12	100S	150E	4301331888	14542	Federal	OW	P	C
WEST RIVER BEND 16-17-10-17	17	100S	170E	4301332057	14543	Federal	OW	P	
WEST DESERT SPRING 11-20-10-17	20	100S	170E	4301332088	14545	Federal	OW	S	
GD 8G-35-9-15	35	090S	150E	4301333821		Federal	OW	APD	C
GD 9G-35-9-15	35	090S	150E	4301333822		Federal	OW	APD	C
GD 10G-35-9-15	35	090S	150E	4301333823		Federal	OW	APD	C
GD 11G-35-9-15	35	090S	150E	4301333824		Federal	OW	APD	C
GD 12G-35-9-15	35	090S	150E	4301333825		Federal	OW	APD	C
GD 13G-35-9-15	35	090S	150E	4301333826		Federal	OW	APD	C
GD 1G-34-9-15	34	090S	150E	4301333827	16920	Federal	OW	P	
GD 2G-34-9-15	34	090S	150E	4301333828		Federal	OW	APD	C
GD 7G-34-9-15	34	090S	150E	4301333829		Federal	OW	APD	C
GD 7G-35-9-15	35	090S	150E	4301333830		Federal	OW	APD	C
GD 14G-35-9-15	35	090S	150E	4301333831		Federal	OW	APD	C
GD 15G-35-9-15	35	090S	150E	4301333832		Federal	OW	APD	C
GD 16G-35-9-15	35	090S	150E	4301333833	16921	Federal	OW	P	
GD 1G-35-9-15	35	090S	150E	4301333834		Federal	OW	APD	C
GD 2G-35-9-15	35	090S	150E	4301333835		Federal	OW	APD	C
GD 3G-35-9-15	35	090S	150E	4301333836		Federal	OW	APD	C
GD 4G-35-9-15	35	090S	150E	4301333837		Federal	OW	APD	C
GD 5G-35-9-15	35	090S	150E	4301333838		Federal	OW	APD	C
GD 6G-35-9-15	35	090S	150E	4301333839		Federal	OW	APD	C
GD 8G-34-9-15	34	090S	150E	4301333840		Federal	OW	APD	C
GD 9G-34-9-15	34	090S	150E	4301333841		Federal	OW	APD	C
GD 10G-34-9-15	34	090S	150E	4301333842		Federal	OW	APD	C
GD 15G-34-9-15	34	090S	150E	4301333843		Federal	OW	APD	C
GD 16G-34-9-15	34	090S	150E	4301333844		Federal	OW	APD	C
GOVT 18-2	18	230S	170E	4301930679	2575	Federal	OW	P	
FEDERAL 2-29-7-22	29	070S	220E	4304715423	5266	Federal	GW	TA	
UTAH FED D-1	14	070S	240E	4304715936	10699	Federal	GW	S	
UTAH FED D-2	25	070S	240E	4304715937	9295	Federal	GW	S	
PRINCE 1	10	070S	240E	4304716199	7035	Federal	GW	P	
UTAH FED D-4	14	070S	240E	4304731215	9297	Federal	GW	S	
ISLAND UNIT 16	11	100S	180E	4304731505	1061	Federal	OW	S	
EAST COYOTE FED 14-4-8-25	04	080S	250E	4304732493	11630	Federal	OW	P	
PRINCE 4	03	070S	240E	4304732677	7035	Federal	OW	P	
GH 21 WG	21	080S	210E	4304732692	11819	Federal	GW	P	
OU SG 6-14-8-22	14	080S	220E	4304732746	11944	Federal	GW	S	
FLU KNOLLS FED 23-3	03	100S	180E	4304732754	12003	Federal	OW	P	
GH 22 WG	22	080S	210E	4304732818	12336	Federal	GW	P	
OU GB 12W-20-8-22	20	080S	220E	4304733249	13488	Federal	GW	P	
OU GB 15-18-8-22	18	080S	220E	4304733364	12690	Federal	GW	P	
OU GB 3W-17-8-22	17	080S	220E	4304733513	12950	Federal	GW	P	
OU GB 5W-17-8-22	17	080S	220E	4304733514	12873	Federal	GW	P	
WV 9W-8-8-22	08	080S	220E	4304733515	13395	Federal	GW	P	
OU GB 9W-18-8-22	18	080S	220E	4304733516	12997	Federal	GW	P	
OU GB 3W-20-8-22	20	080S	220E	4304733526	13514	Federal	GW	P	
OU GB 12W-30-8-22	30	080S	220E	4304733670	13380	Federal	GW	P	
WV 10W-8-8-22	08	080S	220E	4304733814	13450	Federal	GW	P	
GH 7W-21-8-21	21	080S	210E	4304733845	13050	Federal	GW	P	
GH 9W-21-8-21	21	080S	210E	4304733846	13074	Federal	GW	P	

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Questar Exploration Production Company (N5085) to QEP Energy Company (N3700)
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well_name	sec	tpw	rng	api	entity	mineral lease	type	stat	C
GH 11W-21-8-21	21	080S	210E	4304733847	13049	Federal	GW	P	
GH 15W-21-8-21	21	080S	210E	4304733848	13051	Federal	GW	P	
WV 2W-9-8-21	09	080S	210E	4304733905	13676	Federal	GW	P	
WV 7W-22-8-21	22	080S	210E	4304733907	13230	Federal	GW	P	
WV 9W-23-8-21	23	080S	210E	4304733909	13160	Federal	GW	P	
GH 14W-20-8-21	20	080S	210E	4304733915	13073	Federal	GW	P	
OU GB 4W-30-8-22	30	080S	220E	4304733945	13372	Federal	GW	P	
OU GB 9W-19-8-22	19	080S	220E	4304733946	13393	Federal	GW	P	
OU GB 10W-30-8-22	30	080S	220E	4304733947	13389	Federal	GW	P	
OU GB 12W-19-8-22	19	080S	220E	4304733948	13388	Federal	GW	P	
GB 9W-25-8-21	25	080S	210E	4304733960	13390	Federal	GW	P	
SU 1W-5-8-22	05	080S	220E	4304733985	13369	Federal	GW	P	
SU 3W-5-8-22	05	080S	220E	4304733987	13321	Federal	OW	S	
SU 7W-5-8-22	05	080S	220E	4304733988	13235	Federal	GW	P	
SU 9W-5-8-22	05	080S	220E	4304733990	13238	Federal	GW	P	
SU 13W-5-8-22	05	080S	220E	4304733994	13236	Federal	GW	TA	
SU 15W-5-8-22	05	080S	220E	4304733996	13240	Federal	GW	P	
WV 8W-8-8-22	08	080S	220E	4304734005	13320	Federal	GW	P	
WV 14W-8-8-22	08	080S	220E	4304734007	13322	Federal	GW	S	
OU GB 6W-20-8-22	20	080S	220E	4304734018	13518	Federal	GW	P	
OU GB 5W-30-8-22	30	080S	220E	4304734025	13502	Federal	GW	P	
OU GB 11W-20-8-22	20	080S	220E	4304734039	13413	Federal	GW	P	
OU GB 4W-20-8-22	20	080S	220E	4304734043	13520	Federal	GW	P	
GH 5W-21-8-21	21	080S	210E	4304734147	13387	Federal	GW	P	
GH 6W-21-8-21	21	080S	210E	4304734148	13371	Federal	GW	P	
GH 8W-21-8-21	21	080S	210E	4304734149	13293	Federal	GW	P	
GH 10W-20-8-21	20	080S	210E	4304734151	13328	Federal	GW	P	
GH 10W-21-8-21	21	080S	210E	4304734152	13378	Federal	GW	P	
GH 12W-21-8-21	21	080S	210E	4304734153	13294	Federal	GW	P	
GH 14W-21-8-21	21	080S	210E	4304734154	13292	Federal	GW	P	
GH 16W-21-8-21	21	080S	210E	4304734157	13329	Federal	GW	P	
WV 2W-3-8-21	03	080S	210E	4304734207	13677	Federal	GW	P	
OU GB 5W-20-8-22	20	080S	220E	4304734209	13414	Federal	GW	P	
WV 6W-22-8-21	22	080S	210E	4304734272	13379	Federal	GW	P	
GH 1W-20-8-21	20	080S	210E	4304734327	13451	Federal	GW	P	
GH 2W-20-8-21	20	080S	210E	4304734328	13527	Federal	GW	P	
GH 3W-20-8-21	20	080S	210E	4304734329	13728	Federal	GW	P	
GH 7W-20-8-21	20	080S	210E	4304734332	13537	Federal	GW	P	
GH 9W-20-8-21	20	080S	210E	4304734333	13411	Federal	GW	P	
GH 11W-20-8-21	20	080S	210E	4304734334	13410	Federal	GW	P	
GH 15W-20-8-21	20	080S	210E	4304734335	13407	Federal	GW	P	
GH 16W-20-8-21	20	080S	210E	4304734336	13501	Federal	GW	P	
WV 12W-23-8-21	23	080S	210E	4304734343	13430	Federal	GW	P	
OU GB 13W-20-8-22	20	080S	220E	4304734348	13495	Federal	GW	P	
OU GB 14W-20-8-22	20	080S	220E	4304734349	13507	Federal	GW	P	
OU GB 11W-29-8-22	29	080S	220E	4304734350	13526	Federal	GW	P	
SU PURDY 14M-30-7-22	30	070S	220E	4304734384	13750	Federal	GW	S	
WVX 11G-5-8-22	05	080S	220E	4304734388	13422	Federal	OW	P	
WVX 13G-5-8-22	05	080S	220E	4304734389	13738	Federal	OW	P	
WVX 15G-5-8-22	05	080S	220E	4304734390	13459	Federal	OW	P	
SU BRENNAN W 15W-18-7-22	18	070S	220E	4304734403	13442	Federal	GW	TA	

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SU 16W-5-8-22	05	080S	220E	4304734446	13654	Federal	GW	P	
SU 2W-5-8-22	05	080S	220E	4304734455	13700	Federal	GW	P	
SU 10W-5-8-22	05	080S	220E	4304734456	13540	Federal	GW	P	
WV 16W-8-8-22	08	080S	220E	4304734470	13508	Federal	GW	P	
OU GB 16WX-30-8-22	30	080S	220E	4304734506	13431	Federal	GW	P	
OU GB 1W-19-8-22	19	080S	220E	4304734512	13469	Federal	GW	P	
OU GB 2W-19-8-22	19	080S	220E	4304734513	13461	Federal	GW	P	
OU GB 5W-19-8-22	19	080S	220E	4304734514	13460	Federal	GW	P	
OU GB 7W-19-8-22	19	080S	220E	4304734515	13462	Federal	GW	P	
OU GB 8W-19-8-22	19	080S	220E	4304734516	13489	Federal	GW	P	
OU GB 11W-19-8-22	19	080S	220E	4304734517	13467	Federal	GW	P	
OU GB 16W-19-8-22	19	080S	220E	4304734522	13476	Federal	GW	P	
OU GB 1W-30-8-22	30	080S	220E	4304734528	13487	Federal	GW	S	
OU GB 3W-30-8-22	30	080S	220E	4304734529	13493	Federal	GW	P	
OU GB 6W-30-8-22	30	080S	220E	4304734530	13519	Federal	GW	P	
OU GB 7W-30-8-22	30	080S	220E	4304734531	13494	Federal	GW	P	
OU GB 8W-30-8-22	30	080S	220E	4304734532	13483	Federal	GW	P	
OU GB 9W-30-8-22	30	080S	220E	4304734533	13500	Federal	GW	P	
OU GB 6W-19-8-22	19	080S	220E	4304734534	13475	Federal	GW	P	
OU GB 10W-19-8-22	19	080S	220E	4304734535	13479	Federal	GW	P	
OU GB 13W-19-8-22	19	080S	220E	4304734536	13478	Federal	GW	P	
OU GB 14W-19-8-22	19	080S	220E	4304734537	13484	Federal	GW	P	
OU GB 15W-19-8-22	19	080S	220E	4304734538	13482	Federal	GW	P	
OU GB 12W-17-8-22	17	080S	220E	4304734542	13543	Federal	GW	P	
OU GB 6W-17-8-22	17	080S	220E	4304734543	13536	Federal	GW	P	
OU GB 13W-17-8-22	17	080S	220E	4304734544	13547	Federal	GW	P	
OU GB 6W-29-8-22	29	080S	220E	4304734545	13535	Federal	GW	P	
OU GB 3W-29-8-22	29	080S	220E	4304734546	13509	Federal	GW	P	
OU GB 13W-29-8-22	29	080S	220E	4304734547	13506	Federal	GW	P	
OU GB 4W-29-8-22	29	080S	220E	4304734548	13534	Federal	GW	P	
OU GB 5W-29-8-22	29	080S	220E	4304734549	13505	Federal	GW	P	
OU GB 14W-17-8-22	17	080S	220E	4304734550	13550	Federal	GW	P	
OU GB 11W-17-8-22	17	080S	220E	4304734553	13671	Federal	GW	P	
OU GB 14W-29-8-22	29	080S	220E	4304734554	13528	Federal	GW	P	
OU GB 2W-17-8-22	17	080S	220E	4304734559	13539	Federal	GW	P	
OU GB 7W-17-8-22	17	080S	220E	4304734560	13599	Federal	GW	P	
OU GB 16W-18-8-22	18	080S	220E	4304734563	13559	Federal	GW	P	
OU GB 1W-29-8-22	29	080S	220E	4304734573	13562	Federal	GW	P	
OU GB 7W-29-8-22	29	080S	220E	4304734574	13564	Federal	GW	P	
OU GB 8W-29-8-22	29	080S	220E	4304734575	13609	Federal	GW	S	
OU GB 9W-29-8-22	29	080S	220E	4304734576	13551	Federal	GW	P	
OU GB 10W-29-8-22	29	080S	220E	4304734577	13594	Federal	GW	P	
OU GB 15W-29-8-22	29	080S	220E	4304734578	13569	Federal	GW	P	
OU GB 2W-20-8-22	20	080S	220E	4304734599	13664	Federal	GW	P	
OU GB 2W-29-8-22	29	080S	220E	4304734600	13691	Federal	GW	P	
OU GB 15W-17-8-22	17	080S	220E	4304734601	13632	Federal	GW	P	
OU GB 16W-17-8-22	17	080S	220E	4304734602	13639	Federal	GW	P	
OU GB 16W-29-8-22	29	080S	220E	4304734603	13610	Federal	GW	P	
OU GB 1W-20-8-22	20	080S	220E	4304734604	13612	Federal	GW	P	
OU GB 1W-17-8-22	17	080S	220E	4304734623	13701	Federal	GW	P	
OU GB 9W-17-8-22	17	080S	220E	4304734624	13663	Federal	GW	P	

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OU GB 10W-17-8-22	17	080S	220E	4304734625	13684	Federal	GW	P	
OU GB 9W-20-8-22	20	080S	220E	4304734630	13637	Federal	GW	P	
OU GB 10W-20-8-22	20	080S	220E	4304734631	13682	Federal	GW	P	
OU GB 15W-20-8-22	20	080S	220E	4304734632	13613	Federal	GW	P	
OU WIH 15MU-21-8-22	21	080S	220E	4304734634	13991	Federal	GW	P	
OU WIH 13W-21-8-22	21	080S	220E	4304734646	13745	Federal	GW	P	
OU GB 11W-15-8-22	15	080S	220E	4304734648	13822	Federal	GW	P	
OU GB 13W-9-8-22	09	080S	220E	4304734654	13706	Federal	GW	P	
OU WIH 14W-21-8-22	21	080S	220E	4304734664	13720	Federal	GW	P	
OU GB 12WX-29-8-22	29	080S	220E	4304734668	13555	Federal	GW	P	
OU WIH 10W-21-8-22	21	080S	220E	4304734681	13662	Federal	GW	P	
OU GB 4G-21-8-22	21	080S	220E	4304734685	13772	Federal	OW	P	
OU GB 3W-21-8-22	21	080S	220E	4304734686	13746	Federal	GW	P	
OU GB 16SG-30-8-22	30	080S	220E	4304734688	13593	Federal	GW	P	
OU WIH 7W-21-8-22	21	080S	220E	4304734689	13716	Federal	GW	P	
OU GB 5W-21-8-22	21	080S	220E	4304734690	13770	Federal	GW	P	
WIH 1MU-21-8-22	21	080S	220E	4304734693	14001	Federal	GW	P	
OU GB 5G-19-8-22	19	080S	220E	4304734695	13786	Federal	OW	P	
OU GB 7W-20-8-22	20	080S	220E	4304734705	13710	Federal	GW	P	
OU SG 14W-15-8-22	15	080S	220E	4304734710	13821	Federal	GW	P	
OU SG 15W-15-8-22	15	080S	220E	4304734711	13790	Federal	GW	P	
OU SG 16W-15-8-22	15	080S	220E	4304734712	13820	Federal	GW	P	
OU SG 4W-15-8-22	15	080S	220E	4304734713	13775	Federal	GW	P	
OU SG 12W-15-8-22	15	080S	220E	4304734714	13838	Federal	GW	P	
OU GB 5MU-15-8-22	15	080S	220E	4304734715	13900	Federal	GW	P	
OU SG 8W-15-8-22	15	080S	220E	4304734717	13819	Federal	GW	P	
OU SG 9W-15-8-22	15	080S	220E	4304734718	13773	Federal	GW	P	
OU SG 10W-15-8-22	15	080S	220E	4304734719	13722	Federal	GW	P	
OU SG 2MU-15-8-22	15	080S	220E	4304734721	13887	Federal	GW	P	
OU SG 7W-15-8-22	15	080S	220E	4304734722	13920	Federal	GW	P	
OU GB 14SG-29-8-22	29	080S	220E	4304734743	14034	Federal	GW	P	
OU GB 16SG-29-8-22	29	080S	220E	4304734744	13771	Federal	GW	P	
OU GB 13W-10-8-22	10	080S	220E	4304734754	13774	Federal	GW	P	
OU GB 6MU-21-8-22	21	080S	220E	4304734755	14012	Federal	GW	P	
OU SG 10W-10-8-22	10	080S	220E	4304734764	13751	Federal	GW	P	
OU GB 14M-10-8-22	10	080S	220E	4304734768	13849	Federal	GW	P	
OU SG 9W-10-8-22	10	080S	220E	4304734783	13725	Federal	GW	P	
OU SG 16W-10-8-22	10	080S	220E	4304734784	13781	Federal	GW	P	
SU BW 6M-7-7-22	07	070S	220E	4304734837	13966	Federal	GW	P	
GB 3M-27-8-21	27	080S	210E	4304734900	14614	Federal	GW	P	
WVX 11D-22-8-21	22	080S	210E	4304734902	14632	Federal	GW	P	
GB 11M-27-8-21	27	080S	210E	4304734952	13809	Federal	GW	P	
GB 9D-27-8-21	27	080S	210E	4304734956	14633	Federal	GW	P	
GB 1D-27-8-21	27	080S	210E	4304734957	14634	Federal	GW	P	
WRU EIH 2M-35-8-22	35	080S	220E	4304735052	13931	Federal	GW	P	
GH 12MU-20-8-21	20	080S	210E	4304735069	14129	Federal	GW	P	
OU SG 4W-11-8-22	11	080S	220E	4304735071	14814	Federal	GW	OPS	C
OU SG 5W-11-8-22	11	080S	220E	4304735072	14815	Federal	GW	OPS	C
SG 6ML-11-8-22	11	080S	220E	4304735073	14825	Federal	GW	P	
OU SG 5MU-14-8-22	14	080S	220E	4304735076	13989	Federal	GW	P	
OU SG 6MU-14-8-22	14	080S	220E	4304735077	14128	Federal	GW	P	

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SG 12MU-14-8-22	14	080S	220E	4304735078	13921	Federal	GW	P	
OU SG 13MU-14-8-22	14	080S	220E	4304735079	13990	Federal	GW	P	
OU SG 9MU-11-8-22	11	080S	220E	4304735091	13967	Federal	GW	P	
SG 11SG-23-8-22	23	080S	220E	4304735099	13901	Federal	GW	TA	
OU SG 14W-11-8-22	11	080S	220E	4304735114	14797	Federal	GW	OPS	C
SG 5MU-23-8-22	23	080S	220E	4304735115	14368	Federal	GW	P	
SG 6MU-23-8-22	23	080S	220E	4304735116	14231	Federal	GW	P	
SG 14MU-23-8-22	23	080S	220E	4304735117	14069	Federal	GW	P	
SG 12MU-23-8-22	23	080S	220E	4304735188	14412	Federal	GW	P	
SG 13MU-23-8-22	23	080S	220E	4304735190	14103	Federal	GW	P	
WH 7G-10-7-24	10	070S	240E	4304735241	14002	Federal	GW	S	
GB 4D-28-8-21	28	080S	210E	4304735246	14645	Federal	GW	P	
GB 7M-28-8-21	28	080S	210E	4304735247	14432	Federal	GW	P	
GB 14M-28-8-21	28	080S	210E	4304735248	13992	Federal	GW	P	
SG 11MU-23-8-22	23	080S	220E	4304735257	13973	Federal	GW	P	
SG 15MU-14-8-22	14	080S	220E	4304735328	14338	Federal	GW	P	
EIHX 14MU-25-8-22	25	080S	220E	4304735330	14501	Federal	GW	P	
EIHX 11MU-25-8-22	25	080S	220E	4304735331	14470	Federal	GW	P	
NBE 12ML-10-9-23	10	090S	230E	4304735333	14260	Federal	GW	P	
NBE 13ML-17-9-23	17	090S	230E	4304735334	14000	Federal	GW	P	
NBE 4ML-26-9-23	26	090S	230E	4304735335	14215	Federal	GW	P	
SG 7MU-11-8-22	11	080S	220E	4304735374	14635	Federal	GW	S	
SG 1MU-11-8-22	11	080S	220E	4304735375	14279	Federal	GW	P	
OU SG 13W-11-8-22	11	080S	220E	4304735377	14796	Federal	GW	OPS	C
SG 3MU-11-8-22	11	080S	220E	4304735379	14978	Federal	GW	P	
SG 8MU-11-8-22	11	080S	220E	4304735380	14616	Federal	GW	P	
SG 2MU-11-8-22	11	080S	220E	4304735381	14636	Federal	GW	P	
SG 10MU-11-8-22	11	080S	220E	4304735382	14979	Federal	GW	P	
SU 11MU-9-8-21	09	080S	210E	4304735412	14143	Federal	GW	P	
OU GB 8MU-10-8-22	10	080S	220E	4304735422	15321	Federal	GW	OPS	C
EIHX 2MU-25-8-22	25	080S	220E	4304735427	14666	Federal	GW	P	
EIHX 1MU-25-8-22	25	080S	220E	4304735428	14705	Federal	GW	P	
EIHX 7MU-25-8-22	25	080S	220E	4304735429	14682	Federal	GW	P	
EIHX 8MU-25-8-22	25	080S	220E	4304735430	14706	Federal	GW	P	
EIHX 9MU-25-8-22	25	080S	220E	4304735433	14558	Federal	GW	P	
EIHX 16MU-25-8-22	25	080S	220E	4304735434	14502	Federal	GW	P	
EIHX 15MU-25-8-22	25	080S	220E	4304735435	14571	Federal	GW	P	
EIHX 10MU-25-8-22	25	080S	220E	4304735436	14537	Federal	GW	P	
GB 3MU-3-8-22	03	080S	220E	4304735457	14575	Federal	GW	P	
NBE 15M-17-9-23	17	090S	230E	4304735463	14423	Federal	GW	P	
NBE 7ML-17-9-23	17	090S	230E	4304735464	14232	Federal	GW	P	
NBE 3ML-17-9-23	17	090S	230E	4304735465	14276	Federal	GW	P	
NBE 11M-17-9-23	17	090S	230E	4304735466	14431	Federal	GW	P	
NBE 10ML-10-9-23	10	090S	230E	4304735650	14377	Federal	GW	P	
NBE 6ML-10-9-23	10	090S	230E	4304735651	14422	Federal	GW	P	
NBE 12ML-17-9-23	17	090S	230E	4304735652	14278	Federal	GW	P	
NBE 6ML-26-9-23	26	090S	230E	4304735664	14378	Federal	GW	P	
NBE 11ML-26-9-23	26	090S	230E	4304735665	14340	Federal	GW	P	
NBE 15ML-26-9-23	26	090S	230E	4304735666	14326	Federal	GW	P	
SG 4MU-23-8-22	23	080S	220E	4304735758	14380	Federal	GW	P	
SG 11MU-14-8-22	14	080S	220E	4304735829	14486	Federal	GW	P	

Bonds: BLM = ESB000024

BIA = 956010693

State = 965010695

Questar Exploration Production Company (N5085) to QEP Energy Company (N3700)
effective June 14, 2010

well_name	sec	tpw	rng	api	entity	mineral lease	type	stat	C
RB DS FED 1G-7-10-18	07	100S	180E	4304735932	14457	Federal	OW	S	
RB DS FED 14G-8-10-18	08	100S	180E	4304735933	14433	Federal	OW	P	
OU SG 14MU-14-8-22	14	080S	220E	4304735950	14479	Federal	GW	P	
COY 12ML-24-8-24	24	080S	240E	4304736039	14592	Federal	OW	P	
WIH 1AMU-21-8-22	21	080S	220E	4304736060	14980	Federal	GW	P	
SU 8M-12-7-21	12	070S	210E	4304736096	16610	Federal	GW	OPS	C
NBE 4ML-10-9-23	10	090S	230E	4304736098	15732	Federal	GW	P	
NBE 8ML-10-9-23	10	090S	230E	4304736099	15733	Federal	GW	P	
NBE 16ML-10-9-23	10	090S	230E	4304736100	14728	Federal	GW	S	
SUBW 14M-7-7-22	07	070S	220E	4304736136	15734	Federal	GW	P	
NBE 8ML-12-9-23	12	090S	230E	4304736143	15859	Federal	GW	S	
GB 16D-28-8-21	28	080S	210E	4304736260	14981	Federal	GW	P	
NBE 5ML-10-9-23	10	090S	230E	4304736353	15227	Federal	GW	P	
NBE 7ML-10-9-23	10	090S	230E	4304736355	15850	Federal	GW	P	
NBE 3ML-10-9-23	10	090S	230E	4304736356	15393	Federal	GW	P	
EIHX 4MU-36-8-22	36	080S	220E	4304736444	14875	Federal	GW	P	
EIHX 3MU-36-8-22	36	080S	220E	4304736445	14860	Federal	GW	P	
EIHX 2MU-36-8-22	36	080S	220E	4304736446	14840	Federal	GW	S	
EIHX 1MU-36-8-22	36	080S	220E	4304736447	14861	Federal	GW	P	
NBE 7ML-26-9-23	26	090S	230E	4304736587	16008	Federal	GW	P	
NBE 8ML-26-9-23	26	090S	230E	4304736588	15689	Federal	GW	P	
NBE 1ML-26-9-23	26	090S	230E	4304736589	15880	Federal	GW	P	
NBE 2ML-26-9-23	26	090S	230E	4304736590	15898	Federal	GW	S	
NBE 3ML-26-9-23	26	090S	230E	4304736591	15906	Federal	GW	P	
NBE 5ML-26-9-23	26	090S	230E	4304736592	15839	Federal	GW	P	
NBE 9ML-10-9-23	10	090S	230E	4304736593	15438	Federal	GW	P	
NBE 11ML-10-9-23	10	090S	230E	4304736594	15228	Federal	GW	P	
NBE 15ML-10-9-23	10	090S	230E	4304736595	15439	Federal	GW	P	
NBE 2ML-17-9-23	17	090S	230E	4304736614	15126	Federal	GW	P	
NBE 4ML-17-9-23	17	090S	230E	4304736615	15177	Federal	GW	P	
NBE 6ML-17-9-23	17	090S	230E	4304736616	15127	Federal	GW	S	
NBE 10ML-17-9-23	17	090S	230E	4304736617	15128	Federal	GW	P	
NBE 14ML-17-9-23	17	090S	230E	4304736618	15088	Federal	GW	P	
NBE 9ML-26-9-23	26	090S	230E	4304736619	15322	Federal	GW	P	
NBE 10D-26-9-23	26	090S	230E	4304736620	15975	Federal	GW	S	
NBE 12ML-26-9-23	26	090S	230E	4304736621	15840	Federal	GW	P	
NBE 13ML-26-9-23	26	090S	230E	4304736622	15690	Federal	GW	P	
NBE 14ML-26-9-23	26	090S	230E	4304736623	15262	Federal	GW	P	
NBE 16ML-26-9-23	26	090S	230E	4304736624	15735	Federal	GW	P	
WF 1P-1-15-19	06	150S	200E	4304736781	14862	Indian	GW	P	
SG 3MU-23-8-22	14	080S	220E	4304736940	15100	Federal	GW	P	
NBE 5ML-17-9-23	17	090S	230E	4304736941	15101	Federal	GW	P	
TU 14-9-7-22	09	070S	220E	4304737345	16811	Federal	GW	OPS	C
WF 14C-29-15-19	29	150S	190E	4304737541	15178	Indian	GW	P	
NBE 2ML-10-9-23	10	090S	230E	4304737619	15860	Federal	GW	P	
GB 16ML-20-8-22	20	080S	220E	4304737664	15948	Federal	GW	P	
WVX 8ML-5-8-22	05	080S	220E	4304738140		Federal	GW	APD	C
WVX 6ML-5-8-22	05	080S	220E	4304738141		Federal	GW	APD	C
WVX 1MU-17-8-21	17	080S	210E	4304738156		Federal	GW	APD	C
GH 8-20-8-21	20	080S	210E	4304738157		Federal	GW	APD	C
WVX 4MU-17-8-21	17	080S	210E	4304738190		Federal	GW	APD	C

Bonds: BLM = ESB000024

BIA = 956010693

State = 965010695

Questar Exploration Production Company (N5085) to QEP Energy Company (N3700)
effective June 14, 2010

well_name	sec	tpw	rng	api	entity	mineral lease	type	stat	C
WVX 16MU-18-8-21	18	080S	210E	4304738191		Federal	GW	APD	C
GH 7D-19-8-21	19	080S	210E	4304738267	16922	Federal	GW	P	
WF 8C-15-15-19	15	150S	190E	4304738405	17142	Indian	GW	OPS	C
WVX 1MU-18-8-21	18	080S	210E	4304738659		Federal	GW	APD	C
WVX 9MU-18-8-21	18	080S	210E	4304738660		Federal	GW	APD	C
GB 12SG-29-8-22	29	080S	220E	4304738766	16096	Federal	GW	S	
GB 10SG-30-8-22	30	080S	220E	4304738767	16143	Federal	GW	S	
FR 14P-20-14-20	20	140S	200E	4304739168	16179	Federal	GW	P	
SU 11M-8-7-22	08	070S	220E	4304739175		Federal	GW	APD	C
HB 2M-9-7-22	09	070S	220E	4304739176		Federal	GW	APD	C
SUMA 4M-20-7-22	20	070S	220E	4304739177		Federal	GW	APD	C
SU 16M-31-7-22	31	070S	220E	4304739178		Federal	GW	APD	C
FR 13P-20-14-20	20	140S	200E	4304739226	16719	Federal	GW	P	
SG 11BML-23-8-22	23	080S	220E	4304739230		Federal	GW	APD	C
SG 12DML-23-8-22	23	080S	220E	4304739231		Federal	GW	APD	C
GB 1CML-29-8-22	29	080S	220E	4304739232		Federal	GW	APD	C
NBE 8CD-10-9-23	10	090S	230E	4304739341	16513	Federal	GW	P	
NBE 15AD-10-9-23	10	090S	230E	4304739342		Federal	GW	APD	C
NBE 6DD-10-9-23	10	090S	230E	4304739343		Federal	GW	APD	C
NBE 6AD-10-9-23	10	090S	230E	4304739344		Federal	GW	APD	C
NBE 6BD-10-9-23	10	090S	230E	4304739345		Federal	GW	APD	C
NBE 5DD-10-9-23	10	090S	230E	4304739346	16574	Federal	GW	P	
NBE 7BD-17-9-23	17	090S	230E	4304739347		Federal	GW	APD	C
NBE 4DD-17-9-23	17	090S	230E	4304739348	16743	Federal	GW	P	
NBE 10CD-17-9-23	17	090S	230E	4304739349	16616	Federal	GW	P	
NBE 11CD-17-9-23	17	090S	230E	4304739350		Federal	GW	APD	C
NBE 8BD-26-9-23	26	090S	230E	4304739351	16617	Federal	GW	P	
NBE 3DD-26-9-23	26	090S	230E	4304739352		Federal	GW	APD	C
NBE 3CD-26-9-23	26	090S	230E	4304739353		Federal	GW	APD	C
NBE 7DD-26-9-23	26	090S	230E	4304739354		Federal	GW	APD	C
NBE 12AD-26-9-23	26	090S	230E	4304739355		Federal	GW	APD	C
NBE 5DD-26-9-23	26	090S	230E	4304739356		Federal	GW	APD	C
NBE 13AD-26-9-23	26	090S	230E	4304739357		Federal	GW	APD	C
NBE 14AD-26-9-23	26	090S	230E	4304739358		Federal	GW	APD	C
NBE 9CD-26-9-23	26	090S	230E	4304739359		Federal	GW	APD	C
FR 9P-20-14-20	20	140S	200E	4304739461	17025	Federal	GW	S	
FR 13P-17-14-20	17	140S	200E	4304739462		Federal	GW	APD	C
FR 9P-17-14-20	17	140S	200E	4304739463	16829	Federal	GW	P	
FR 10P-20-14-20	20	140S	200E	4304739465		Federal	GW	APD	C
FR 5P-17-14-20	17	140S	200E	4304739509		Federal	GW	APD	C
FR 15P-17-14-20	17	140S	200E	4304739510		Federal	GW	APD	C
FR 11P-20-14-20	20	140S	200E	4304739587		Federal	GW	APD	
FR 5P-20-14-20	20	140S	200E	4304739588		Federal	GW	APD	C
FR 9P-21-14-20	21	140S	200E	4304739589		Federal	GW	APD	C
FR 13P-21-14-20	21	140S	200E	4304739590		Federal	GW	APD	C
GB 7D-27-8-21	27	080S	210E	4304739661		Federal	GW	APD	C
GB 15D-27-8-21	27	080S	210E	4304739662	16830	Federal	GW	P	
WV 13D-23-8-21	23	080S	210E	4304739663	16813	Federal	GW	P	
WV 15D-23-8-21	23	080S	210E	4304739664	16924	Federal	GW	P	
FR 14P-17-14-20	17	140S	200E	4304739807		Federal	GW	APD	C
FR 12P-20-14-20	20	140S	200E	4304739808		Federal	GW	APD	C

Bonds: BLM = ESB000024

BIA = 956010693

State = 965010695

Questar Exploration Production Company (N5085) to QEP Energy Company (N3700)
effective June 14, 2010

well_name	sec	twp	rng	api	entity	mineral lease	type	stat	C
FR 6P-20-14-20	20	140S	200E	4304739809	16925	Federal	GW	P	
FR 3P-21-14-20	21	140S	200E	4304739810		Federal	GW	APD	C
FR 4P-21-14-20	21	140S	200E	4304739811	16771	Federal	GW	P	
FR 8P-21-14-20	21	140S	200E	4304739812		Federal	GW	APD	C
FR 15P-21-14-20	21	140S	200E	4304739815		Federal	GW	APD	C
FR 2P-20-14-20	20	140S	200E	4304740053		Federal	GW	APD	
FR 2P-21-14-20	21	140S	200E	4304740200		Federal	GW	APD	C
WV 11-23-8-21	23	080S	210E	4304740303		Federal	GW	APD	C
GB 12-27-8-21	27	080S	210E	4304740304		Federal	GW	APD	C
GH 11C-20-8-21	20	080S	210E	4304740352		Federal	GW	APD	C
GH 15A-20-8-21	20	080S	210E	4304740353		Federal	GW	APD	C
GH 10BD-21-8-21	21	080S	210E	4304740354		Federal	GW	APD	C
FR 11P-21-14-20	21	140S	200E	4304740366		Federal	GW	APD	C
MELANGE U 1	09	140S	200E	4304740399		Federal	GW	APD	C
OP 16G-12-7-20	12	070S	200E	4304740481	17527	Federal	OW	DRL	C
OP 4G-12-7-20	12	070S	200E	4304740482		Federal	OW	APD	C
WF 8D-21-15-19	21	150S	190E	4304740489		Indian	GW	APD	C
WF 15-21-15-19	21	150S	190E	4304740490		Indian	GW	APD	
WF 4D-22-15-19	22	150S	190E	4304740491		Indian	GW	APD	C

Bonds: BLM = ESB000024

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United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office

P.O. Box 45155

Salt Lake City, UT 84145-0155

<http://www.blm.gov/ut/st/en.html>



IN REPLY REFER TO:

3100

(UT-922)

JUL 28 2010

Memorandum

To: Vernal Field Office, Price Field Office, Moab Field Office

From: Chief, Branch of Minerals

Roger L. Bankert

Subject: Name Change Recognized

Attached is a copy of the Certificate of Name Change issued by the Texas Secretary of State and a decision letter recognizing the name change from the Eastern States Office. We have updated our records to reflect the name change in the attached list of leases.

The name change from **Questar Exploration and Production Company** into **QEP Energy Company** is effective June 8, 2010.

cc: MMS
UDOGM

RECEIVED

AUG 16 2010

DIV. OF OIL, GAS & MINES